NILE DELTA 1985
DISCHARGES, SALINITIES AND CHEMICAL DATA

PREFACE

The 'Reuse of Drainage Water Project' is a joint activity of the technical agencies:

Drainage Research Institute (DRI), Giza, Cairo in Egypt and

Institute for Land and Water Management Research (ICW), Wageningen in the Netherlands.

The project is financed by the Ministry of Irrigation of Egypt and by the Ministry of Foreign Affairs of the Netherlands in the framework of the joint programme of Technical Cooperation between Egypt and the Netherlands.

The Advisory Panel for Land Drainage in Egypt acts as steering committee.

The results of studies, carried out in the 'Reuse of Drainage Water Project', will be presented in preliminary reports and in a final report. As such, the contents of preliminary reports can vary strongly, from a simple presentation of data to a discussion of research results with tentative conclusions.

All opinions, conclusions and recommendations in the reports are those of the cooperating Institutes, and not of the Ministry of Irrigation of Egypt or the Ministry of Foreign Affairs of the Netherlands.

R E U S E O F D R A I N A G E W A T E R P R O J E C T

YEARBOOK 1985

DRAINAGE WATER IN THE NILE DELTA

DISCHARGES, SALINITIES AND CHEMICAL COMPOSITION

PART A: DISCHARGES AND SALINITIES

PART B: CHEMICAL COMPOSITION

PROJECT TEAM

REPORT 14 CAIRO, 1987

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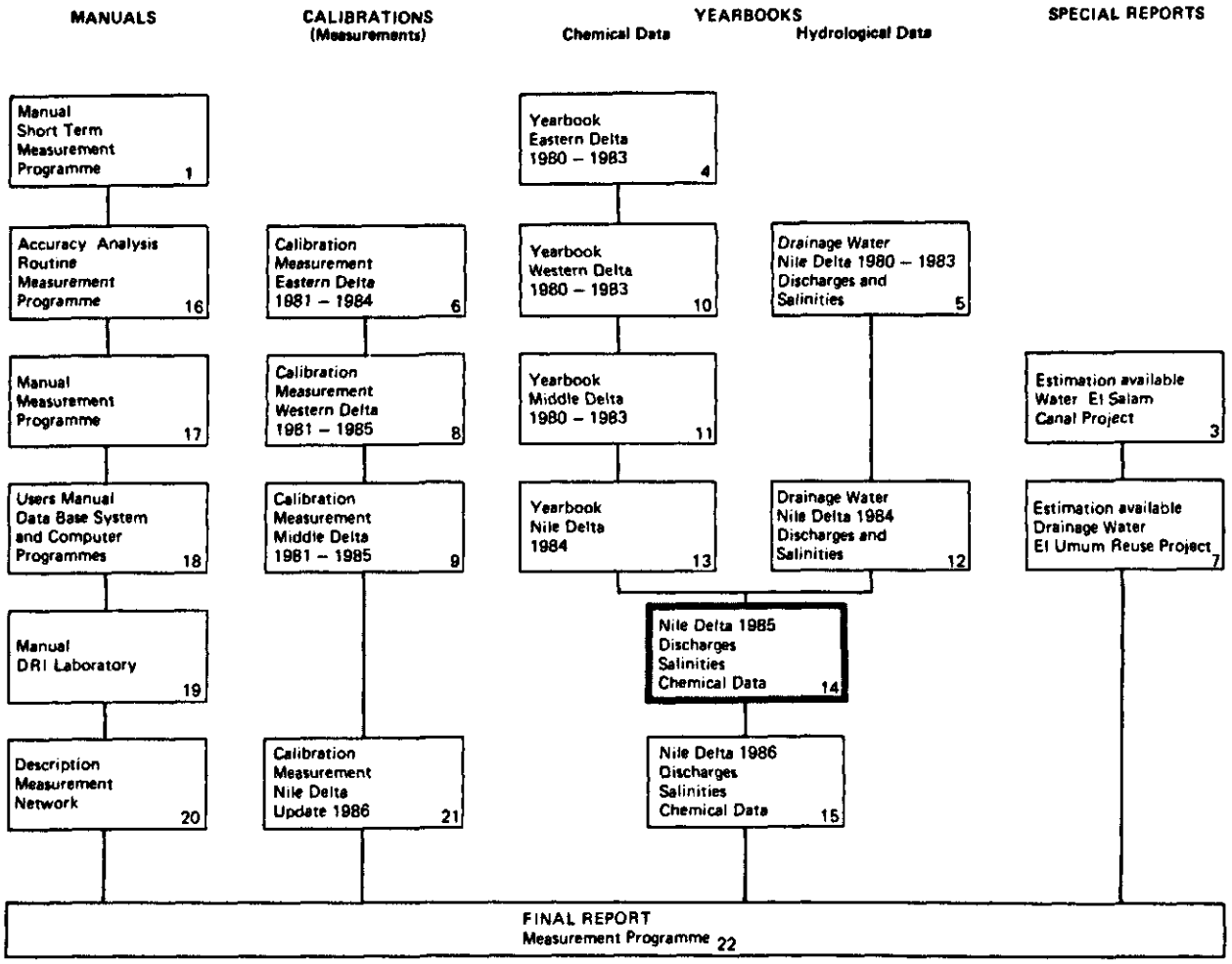
Overview Reports Measurement Programme



FOREWORD

This report is the result of a joint effort of the Dutch - Egyptian Reuse team. It aims at providing decision makers with data that can be used in the planning of new possibilities for the reuse of drainage water.

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C O N T E N T S

SUMMARY AND CONCLUSIONS

For the year 1985 the drainage discharges and salinities at a great number of locations in the Nile Delta have been determined. Data concerning the drainage pumping stations have been collected at most of the pumping stations, with the assistance of the pumping station engineers. The data of the Mechanical and Electrical Department of the Ministry of Irrigation (PROJECT TEAM, 1986) have been used to check the data collected by the DRI. These data have been used to calculate the actual discharges at the pumping stations applying, the discharge relations, established by DRI. Discharges at the open locations have been derived from water level measurements and in some cases velocity measurements and using the discharge relations also established by DRI.

The electrical conductivity (EC) has been recorded continuously by EC recorders at the open locations and twice a day by EC meters at most of the pumping stations. To express the salinity in total dissolved salts (TDS) the recorded EC has been multiplied with a TDS/EC ratio. This ratio is established on basis of the water sample analyses for the years 1980 - 1985 for each location separately.

DRI engineers collected data during the routine trips, every three weeks, and in the meantime recorders and meters were checked and calibrated. They also took water samples at all the measurement locations, which were analysed at the DRI laboratory. For all measuring locations the calculated results are presented on monthly basis. The yearly totals and averages have been summarised per Delta region.

For the whole Nile Delta, with an area of 4,551,000 feddan (including Nubareya Area 280,000 feddan) the total discharge of drainage water during 1985 was 16,501 million m3. During 1985, a quantity of at least 2,859 million m3, with an average salinity of 912 g/m3, has been reused officially. A total of 13,642 million m3 with an average salinity of 2471 g/m3 has been discharged to the Mediterranean Sea or to the coastal lakes, which are in open connection with the sea.

Theoretically about 1.6 billion m3 of drainage water in the salinity class to 1000 g/m3 and about 4.3 billion m3 in the salinity class of 1000 - 1500 g/m3 is available for reuse in the irrigation system.

The Bahr Baqar Drain discharged about 1 billion m3 of drainage water with a salinity of about 1100 g/m3 to Lake Manzala. This water is very polluted by industrial and urban sewage water and it is considered to be unsuitable for reuse. The measured discharge at Bahr Hadus Bridge was 1.6 billion m3 with a salinity of about 1350 g/m3. The water of these two drains is of main importance for reuse in El Salam Project.

Since more experience has been gained and better methods of measurement, analysis and calculation have been used, the results of the year 1985 are more reliable than the reported results in the previous report of the year 1984 (MAASKANT et al, 1986). The application of computer programmes on the Hewlett Packard 150 Personal computer made the elaboration and printing of data in matrices and tables more simple and

easier to repeat.

It might be useful to study the differences of the TDS/EC ratio per location, which were found by calculation, in more detail (Appendix 1.). The TDS/EC ratio established per location, based on the water sample analyses of the years 1980 - 1985 differs from year to year and the TDS/EC ratio decreases from 720 in the southern part to 620 in the northern part of the Delta. It is not in the scope of this report to draw further conclusions on this subject.

1. INTRODUCTION

1.1. General

From 1980 till 1984 the salinity of the drainage water at a number of locations in the Nile Delta has been determined on a routine basis, discharge measurements at the open locations were done. Meanwhile pumping station data of the Mechanical and Electrical Department (MED) of the Ministry of Irrigation were collected. These data were used to calculate the pumping stations discharges.

Since 1985, at most of the pumping stations time counters have been installed and electrical conductivity meters have been distributed. Discharges of drainage- and reuse pumping stations are calculated using the discharge-head relations, determined by DRI, and the operation hours and static head collected. These discharges have been compared with the discharges calculated by the Mechanical and Electrical Department to prevent basic errors.

The discharges of 1985 at the open locations are based on continuous recorded water levels and measured velocities. The discharges have been calculated by using the discharge-relations determinded by DRI.

The drainage water salinity, expressed in total dissolved salts (TDS), is calculated with the recorded and measured electrical conductivity (EC) and the ratio between total dissolved salts and electrical conductivity. This TDS/EC relation has been established per location from the chemical analyses of the water samples during the years 1980 - 1985.

The aim of this report is to present the discharges and salinities of drainage water as the basis for further analyses of the results obtained. Most of the basic work has been done by the Egyptian engineers of DRI. They measured in the field, analysed water samples in the laboratory, collected data at the Ministry of Irrigation, elaborated data and calculated averages and total figures.

1.2. Discharges at pumping stations

For each drainage pumping station in the Nile Delta a discharge - head relation (rating curve) has been determined from calibration measurements during 1980 - 1985. The calibration data for each pump unit (lifting head and discharge) are combined for each pumping station and a rating curve is determined. For some pumping stations more rating curves are obtained because the capacities of the separate units are different.

Most of the pumping stations have been equiped with time counters for every pump unit separately during end 1984 / beginning 1985. Also level gauges have been distributed to the Irrigation Departments. The pumping station engineers note the daily operation hours per unit, the average daily waterlevel at suction and delivery side and they measure the electrical conductivity twice a day.

The discharge per decade at the pumping stations have been calculated by using the rating curves, the average static head (difference between delivery and suction level) and the operation time of the units. Within the DRI these discharges per decade are available. In this report the monthly and yearly discharges are presented (QDRI).

The Mechanical and Electrical Department collects from all the

pumping stations in the Nile Valley and Delta basic data: water level at suction and delivery side, number of operation hours, electricity consumption, total discharge and other data, with the assistance of the local offices of the Ministry of Irrigation. These discharges (QMED) and the other collected data have been used for comparison of the data collected and calculated by the DRI.

In the summary of results the QDRI and QMED are both mentioned and also the ratio between these two discharges (QDRI/QMED). Normally this ratio should be about 1, but for the 61 pumping stations mentioned, the ratio ranged from 0.41 to 1.33. In chapters 6, 7 and 8 the figures concerning QMED, operation hours, head, QDRI and the used discharge relations are presented in tables for each pumping station separately.

1.3. Discharge at open locations

During 1985 most of the level recorders and level gauges at the open locations have been installed in the Nile Delta. For each open drain location, not affected by back water, a stage-discharge relation has been determined from calibration measurements during the years 1984 and 1985. At the locations with water level recorders the water levels are recorded continuously and therefore accurate discharge data have been obtained. During the three weekly field trips water level measurements and sometimes discharge measurements have been done to check the stage - discharge relation. From the recorder sheets the daily average water level has been determined and using the discharge relation the daily average discharge (m3/sec) has been calculated. Average water levels and total discharges (QDRI) per decade, per month and per year have been calculated.

For the open locations affected by "backwater" from the sea, lakes or downstream pumping stations velocity - discharge relations have been determined from calibrations performed during 1985 and 1986. At these locations the average velocity and water level are being recorded. The velocity recorders installed (McCro and ENDECO) had technical breakdowns or were after some hours operating partly covered with water plants which affected the recording. During field trips the recorders have been cleaned and sometimes the velocity at these locations has been measured to calibrate the recorded velocity. During the field trips the discharges have also been measured at those "backwater" locations, not yet equiped with a velocity recorder. However, these incidental measurements gave an insufficient insight into the total daily or monthly discharge, due to daily discharge variations.

The reliable results of discharges at open locations are presented in chapters 6, 7 and 8. In these chapters the figures concerning the water level (WL) in meters above Mean Sea Level, the calculated monthly discharge (Q) in million m3 and in case of a "backwater" location, the velocity at a certain point (Vpt) in m/sec are presented in tables for each open location separately.

1.4. Electrical conductivity and salinity

At most of the locations in the network the electrical conductivity (EC) has been recorded. At the open locations by EC recorders and at the pumping stations by measurements with an EC meter twice a day. At the other locations the EC has been measured by DRI engineers during their

three weekly field trips. During these trips also the recorded EC values have been checked. These continuous EC recordings are the basis for further elaboration and calculation. Daily EC values have been established from these recordings and EC values per decade and monthly weighted averages have been calculated per location. These monthly values have been used to calculate the yearly weighted EC value per location.

In the past, till 1984, the analyses of the water samples have given the basis of the EC values and the TDS values. These water samples were taken during the field trips every three weeks. The EC - and TDS values were interpolated to establish the monthly values. These values gave an indication of the salinity. A more realistic value is given with the results of 1985. However, the EC values of 1985 must be transformed to total dissolved salts (TDS) value, commonly used to present the salinity of the drainage water. The yearly mean average of the TDS/EC ratio has been established for each location separately. This TDS/EC ratio is based on the analyses of the water samples during the years 1980 through 1985. In Appendix 1 the TDS/EC ratio's are presented in tables and maps. Conclusions drawn from these values are:

- the TDS/EC ratio varies during the year per location less than about 10 %
- the yearly average TDS/EC ratio changes from year to year
- the TDS/EC ratio increases from 720 in this southern part of the Delta till 620 in the northern part of the Delta.

In this report the monthly calculated EC values and the TDS values based on the multiplication of EC with the TDS/EC ratio are published. The monthly salt load is obtained by multiplying the salinity with the monthly discharge. The yearly salt load is found by adding the monthly salt loads.

In chapters 6, 7 and 8 the figures concerning electrical conducivity, TDS/EC ratio, salinity and salt load are presented in tables for each location separately.

1.5. Data elaboration and presentation

All measured and collected data have been entered in a data base system using the D-Base programme on the Hewlett Packard 150 personal computers at the DRI office. The data management programme "HYDRO" manages data elaboration, retrieval and calculations using several subroutines for the different types of locations. This results in decade and monthly average water levels, EC values, salinities, discharges and salt loads. The data presentation programme "YEAR" retrieves monthly data and calculates yearly averages and totals and manages the data presentation (BIJNSDORP AND MORSI, 1987).

If, for some locations, no data or incomplete data are available to calculate the averages and the yearly totals, the 'NA' label is typed on the pertinent position in the data matrix. Although all data have been thoroughly checked no absolute guarantee can be given that all presented results are completely correct.

In chapters 6, 7 and 8 the results of pumping stations and open drain locations are given on montly basis. A summary of the yearly averages and totals are given in chapters 3, 4 and 5 for each Delta area separately.

2. THE NILE DELTA

2.1. Drainage water to the Mediterranean Sea

For each location the average yearly discharge and the weighted average salinity has been determined. Subtracting from these totals the quantities reused gives the quantities of water drained to the sea. These quantities are theoretically available for irrigation of new areas, without affecting the present system. Its salinity, however, determines the limits for its use. Although in this report only the salinity is used to classify the quality, it should be noticed that also the chemical composition should be considered before actually reusing this water (Part B of this report).

In order to estimate reliable data on available quantities of drainage water, those quantities that are discharged to the Mediterranean Sea or to the coastal lakes in open connection with the Sea should be considered. In this case the original sources (catchments) and the original salinities of the drainage water are not given, but only the mixture in quantity and quality at these outfalls is known.

Because of incomplete field measurements at some outfalls in the Middle and Western Delta during 1985, it has been decided to define the quantities of drainage water by the quantities of the original sources available (catchments). Unknown in this case is the unofficial reuse quantity in the drain reaches between the sources and the outfall.

In Table 1 the discharges to the Mediterranean Sea, the average salinities and the salt loads for the three main regions of the Nile Delta are presented. The total discharge for each Delta region has been grouped into salinity classes and is given in Table 2. More detailed data are available in the summary tables of the next three chapters.

Some remarks on the results in Tables 1 and 2 are the following:

- the measured discharges at the Bahr Baqar Bridge and at the Bahr Hadus Bridge have been used in these tables
- the discharges of the ten individual pumping stations in the Gharbia Drain are presented in these figures
- the discharges of Burullus and Zagloul PS are taken into account, but their salinity is based on measurements in 1986
- the total discharge of Max PS to the Mediterranean Sea is presented and not the different quantities of drainage water delivered to Lake Mariut.

Table 1. Discharge, salinity and salt load of drainage water to the coastal lakes or the Mediterranean Sea during 1985 per Delta region

Delta region	Discharge million m3/y	Salinity g/m3	Salt load thousand tonnes
Eastern Delta	4,272	1456	6,221
Middle Delta	5,057	2281	11,535
Western Delta	4,313	3699	15,953
Total Delta	13,642	2471	33,709

Table 2. Available drainage water in the Nile Delta during 1985, within different salinity classes.

Salinity class	Eastern Delta million m3/y	Middle Delta million m3/y	Western Delta million m3/y	Total Delta million m3/y
under 1000	943	321	318	1,582
1000- 1500	2,517	1,190	620	4,327
1500- 2000	379	1,644	683	2,706
2000- 3000	-	849	377	1,226
over 3000	433	1,053	2,315	3,801
Total	4,272	5,057	4,313	13,642

Compared with the yearly discharges to the coastal lakes and Sea during 1984 (MAASKANT ET AL, 1986) there is a decrease of only 2 % from 13,983 million m3 to 13,642 million m3. The total salt load increased by 8 %, from 30,972 thousand tonnes to 33,709 thousand tonnes, but this increase is is mainly affected by catchment areas with high salinity, that were not taken in consideration during 1984. The average salinity increased by 10 % from 2214 g/m3 during 1984 to 2471 g/m3 during 1985.

2.2. Reuse of drainage water in the Nile Delta

The quantities of drainage water reused are the totals of the discharges of the reuse pumping stations. This actual reuse of drainage water in the Nile Delta is summarised in Table 3. The discharges have been grouped into salinity classes and presented in Table 4.

The quantities in Table 3 should be considered as the minimum quantities. Additional reuse has been observed along the Bahr Baqar Drain, the Bahr Hadus Drain, the Edko Drain and the Umum Drain. This reuse does not concern reuse for agriculture only, but also for fish farms downstream the Bahr Hadus Bridge and Barsiq PS. Also reuse from several small catchments along the Banks of the Damietta and the Rosetta Branch have not been taken into account. Their drainage water flows freely into the Nile Branches. The unofficial reuse of the Umum Drain has been estimated at 120 million m3 per year (MAASKANT ET AL, 1985). The unknown unofficial reuse of drainage water affects the total discharge to the Sea or coastal lakes.

Table 3. Reuse of drainage water in the Nile Delta during 1985. Discharge, salinity and salt load per Delta region.

Delta region	Discharge million m3/y	Salinity g/m3	Salt load thousand tonnes
Eastern Delta	1,284	886	1,138
Middle Delta	777	882	685
Western Delta	798	984	785
Total Delta	2,859	912	2,608

Table 4. Reuse of drainage water in the Nile Delta during 1985, within different salinity classes.

Salinity class	Eastern Delta million m3/y	Middle Delta million m3/y	Western Delta million m3/y	Total Delta million m3/y
500- 750	283	232	355	870
750- 1000	838	288	302	1,428
1000- 1500	-	257	-	257
1500- 2500	163	-	-	163
2000- 3000	-	-	141	141
Total	1,284	777	798	2,859

The percentage of reuse based on the total drainage water quantity generated in the Delta is at least 23 % in the Eastern Delta, 13 % in the Middle Delta and 17 % in the Western Delta. The reuse quantity for the whole Delta is at least 17 % of the total drainage water generated in the Delta.

The total quantity of drainage water from the Nile Delta during 1985 was 16,501 million m3 of which 2,859 million m3 has been reused officially. Compared with the calculated yearly reuse quantities during 1984 (MAASKANT ET AL, 1986) the total quantity of reuse has not changed noticeable (1984: 2,928 million m3 and 1985: 2,859 million m3). The salinity of the reused drainage water increased about 7 % from 851 g/m3 in 1984 to 912 g/m3 in 1985.

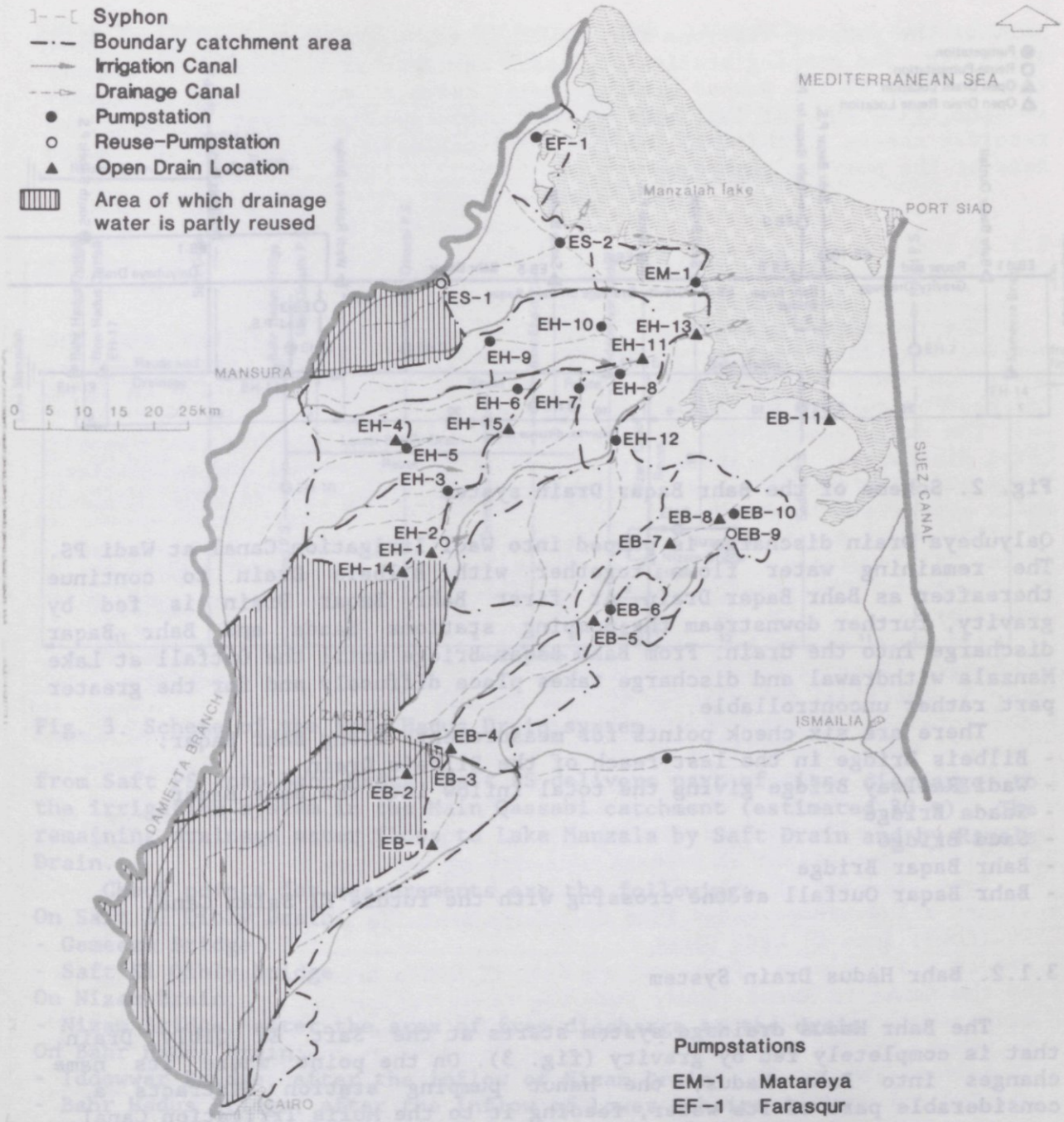
3. THE EASTERN DELTA

3.1. Main drainage catchment systems

The Eastern Delta almost completely drains into Lake Manzala, which in its turn discharges freely into the Mediterranean Sea (fig. 1). A considerable area is drained by two main drain systems, the Bahr Baqar Drain System and the Bahr Hadus Drain System, both flowing into Lake Manzala by gravity. Both systems consist of several catchments. The drainage systems of Matareya, Lower Serw and Farasqur consist of one catchment each. Their pumping stations deliver the drainage water directly to Lake Manzala. The pumping station of the Upper Serw catchment discharges its drainage water into the Damietta Branch of the Nile (reuse)

3.1.1. Bahr Baqar Drain System

Bahr Baqar originates at the confluence of two drains: Bilbeis Drain and Qalyubeya Drain (fig. 2). Bilbeis Drain stems from pump lifted drainage water of urban areas (industrial and household sewage water) in Greater Cairo and is fed by gravity drainage water on its way. Qalyubeya Drain is completely fed by gravity. The two drains discharge approximately equal quantities of drainage water annually, but the main quantity of the



Pumpstations

EM-1	Matareya
EF-1	Farasqur
ES-1	Upper Serw
ES-2	Lower Serw
EH-2	Hanut
EH-3	Sadaqa
EH-5	Nizam
EH-6	Bani Ebeid
EH-7	Add. Kassaby
EH-8	Main Kassaby
EH-9	Geneena
EH-10	Erad
EH-12	Saft
EB-3	Wadi
EB-6	Saada
EB-9	B. Baqar irr.
EB-10	B. Baqar

Open Drain Locations

EH-1	Bridge Saft (abandoned)
EH-4	Nizam Bridge
EH-11	B. Hadus Bridge
EH-13	B. Hadus Outfall
EH-14	Kemeeza Bridge
EH-15	Iddowwar Bridge
EB-1	Bilbeis Bridge
EB-2	Bridge Qalyubeya (abandoned)
EB-4	Wadi Railway Bridge
EB-5	Saada Bridge
EB-7	Saud Bridge
EB-8	B.Baqar Bridge
EB-11	B.Baqar Outfall

Fig. 1. Survey of catchments and drainage systems in the Eastern Delta

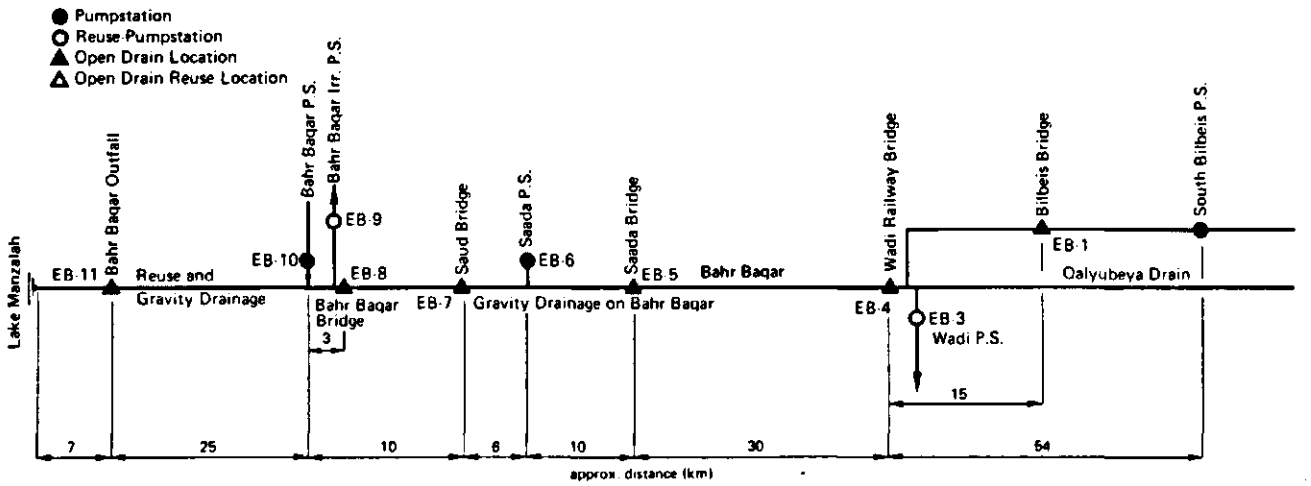


Fig. 2. Scheme of the Bahr Baqar Drain system

Qalyubeya Drain discharge is pumped into Wadi Irrigation Canal at Wadi PS. The remaining water flows together with Bilbeis Drain to continue thereafter as Bahr Baqar Drain. At first Bahr Baqar Drain is fed by gravity, further downstream the pumping stations Saada and Bahr Baqar discharge into the drain. From Bahr Baqar Bridge until the Outfall at Lake Manzala withdrawal and discharge takes place diffusely and for the greater part rather uncontrollable.

There are six check points for measurements along Bahr Baqar:
- Bilbeis Bridge in the last reach of the Bilbeis Drain
- Wadi Railway Bridge giving the total inflow into the Bahr Baqar
- Saada Bridge
- Saud Bridge
- Bahr Baqar Bridge
- Bahr Baqar Outfall at the crossing with the future El Salam Canal

3.1.2. Bahr Hadus Drain System

The Bahr Hadus drainage system starts at the Saft El Qibly Drain, that is completely fed by gravity (fig. 3). On the point where its name changes into Bahr Hadus, the Hanut pumping station distracts a considerable part of its water, feeding it to the Moiis Irrigation Canal.

Next it receives water from the freely flowing Nizam Drain and from the pumping stations Sadaqa, Beni Abeid, Additional Qassabi and Main Qassibi. The Nizam Drain is fed by gravity in its upstream part and by Nizam pumping station more downstream. From the lower reach of Nizam Drain as well as from Bahr Hadus water is reused for irrigation diffusely.

Upstream of the Baqar Hadus Bridge a side branch conveys the discharge from Geneena and Erad pumping stations into the Bahr Hadus. It can be stated however, that the discharge from Geneena pumping station is entirely reused for irrigation in the Lower Beheira Drain on its way to Bahr Hadus. For this reason the Geneena PS is de facto a reuse pumping station.

In the reach between Bahr Hadus Bridge and the Outfall reuse from and drainage to Bahr Hadus takes place diffusely and in unknown quantities. Before the Outfall the Saft Drain discharges an unknown quantity coming

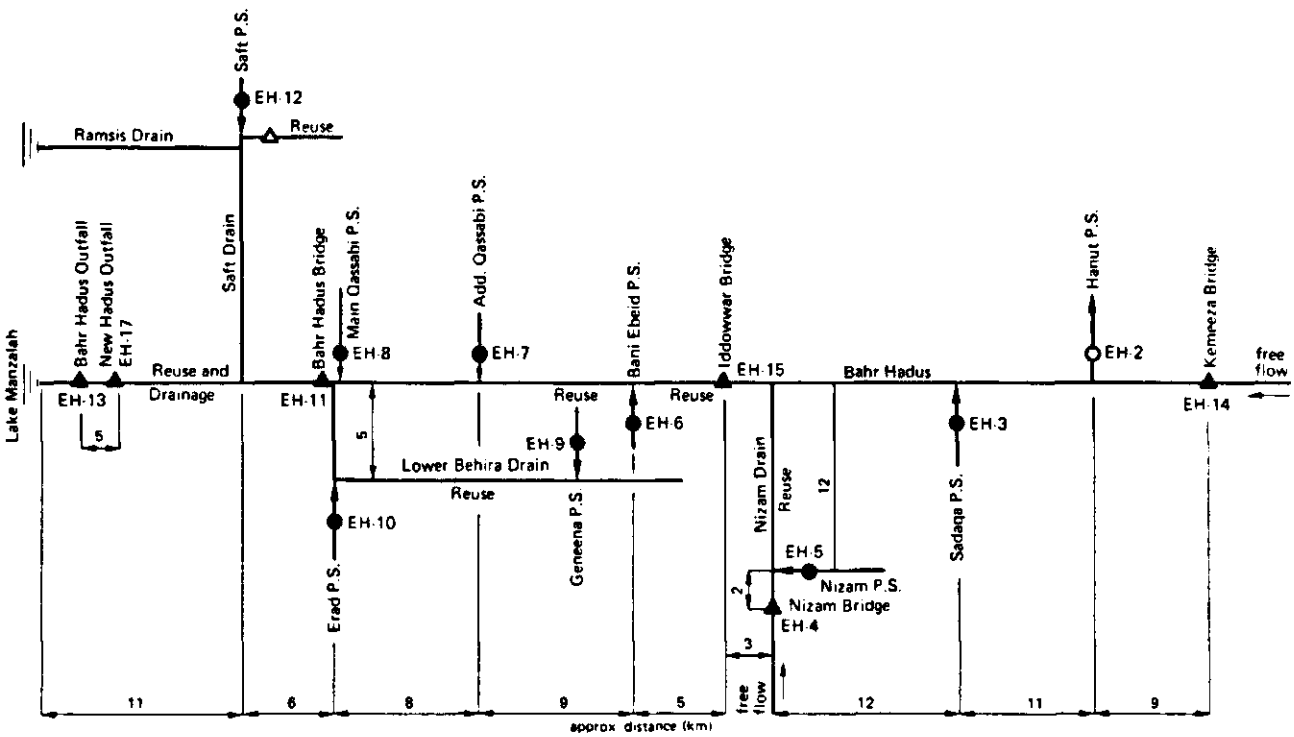


Fig. 3. Scheme of the Bahr Hadus Drain system

from Saft PS into Bahr Hadus. Saft PS delivers part of its discharge to the irrigation system in the Main Qassabi catchment (estimated 30 %). The remaining drainage water flows to Lake Manzala by Saft Drain and by Ramsis Drain.

Check points for measurements are the following:

On Saft El Qibly Drain:
- Gemeeza Bridge
- Saft El Qibly Bridge

On Nizam Drain:
- Nizam Bridge, after the area of free discharge to the drain

On Bahr Hadus Drain:
- Iddowwar Bridge, after the inflow of Nizam Drain
- Bahr Hadus Bridge, after the inflow of Lower Beheira drain
- New Bahr Hadus Outfall, just before Lake Manzala

3.2. Pumping stations and open locations

From 1981 till 1984 measurements for the calibration of pumping stations and open drain locations have been executed. The main results of these calibrations are the discharge - head relations of the units of pumping stations and the discharge relations of the open locations (BIJNSDORP ET AL, 1985). These relations have been used to calculate discharges per decade of the pumping stations and the daily discharges of the open locations.

During 1984 and 1985 water level recorders and electrical conductivity (EC) recorders have been installed at the open locations. At

most of the pumping stations time counters for every pump unit have been installed. The pumping station engineers received an EC meter to measure the EC value of the pumped drainage water twice a day. During 3 weekly routine trips the DRI engineers checked the recorders and changed the recorder sheets at the open locations and collected and checked the noted data at the pumping stations.

3.3. Discharges and salinities in the Eastern Delta

The recorded and measured data from the open locations and the pumping stations have been elaborated to daily EC values, water levels, operation hours and discharges. Using a TDS/EC ratio the salinity in g/m3 has been calculated for each location separately.

The daily values have been totalized to decade, monthly and yearly total discharges, salt loads, average water levels (heads) and salinities. These hydrological values are presented for all locations of the Eastern Delta separately in chapter 6.

The water samples, taken during the field trips, have been analysed by the DRI laboratory. These chemical analyses are presented in part B of this report. The basic sample analyses are available at the DRI laboratory.

A summary of the hydrological results, based on the yearly total discharges, average weighted salinities and salt load is presented in Table 5. The final calculation of this summary gives:

- the total quantity of drainage water released to the coastal Lake Manzala was 4,272 million m3 with a salt load of 6,221 thousand tonnes, resulting in an average salinity of 1456 g/m3
- the total quantity of drainage water officially reused in the irrigation system was 1,284 million m3 with a salt load of 1,138 thousand tonnes, resulting results in an average salinity of 886 g/m3

Some comments on this summary are the following:

- almost all drainage water from Qalyubeya Drain is pumped by Wadi Reuse PS (EB03) into El Wadi Canal
- almost all drainage water passing Saft El Qibly Bridge (EH01) is pumped by the Reuse PS Hanut (EH02) into the Hanut Irrigation Canal
- it has been assumed that all drainage water pumped by Geneena PS (EH09) is reused by the farmers before the confluence with Erad PS
- El Arin catchment (EH16) is part of the Saft catchment. Only water samples are taken at this location
- Saft PS (EH12) gives the discharge and the salinity of its complete catchment, including El Arin Catchment. A distribution structure diverts part of the drainage water (estimated 30 %) into the Main Qassabi catchment. The remaining 70 % flows partly through Saft Drain to Bahr Hadus and partly through Ramsis Drain to Lake Manzala directly
- Upper Serw PS (ES01) pumps its drainage water into the Damietta Branch from where the water is used downstream
- the discharge at Bahr Baqar Bridge (EB08) is obtained from a less reliable rating curve
- the discharge at Bahr Hadus Bridge (EH11) is obtained from a sensitive rating curve

The average salinity of the drainage water per catchment area is classified and presented in fig. 4. The salinity of the drainage water in the high elevated catchments in the southern part and the catchments,

Table 5. Summary of discharges, drainage rates, salinities and salt loads of the Eastern Delta in 1985

CATCHM.AREA = CATCHMENT AREA upstreams of the pump station or location in thousand feddan (10^3fd)
Q MED = DISCHARGE OF THE PUMP STATION CALCULATED BY THE MECH.& ELECTRICAL DEP. yearly total in million m3(10^6m3)
Q DRI = DRAINAGE WATER DISCHARGE CALCULATED BY DRI yearly total in million m3 (10^6m3)
QD/QM = RATIO between Q DRI and Q MED (ratio)
DR.RT = DRAINAGE RATE in millimetere per day (mm/day), inclusive sewage water
EC = ELECTRICAL CONDUCTIVITY of the drainage water in millimhos per cm or milliSiemens per cm (mS/cm)
TDS = TOTAL DISSOLVED SALTS yearly average in grams SALT per m3 (g/m3)
TDS/EC = RELATION between TDS and EC (ratio)
SALTLD = SALT LOAD yearly total in thousand tons SALT (10^3tn)
DISCH = Q DRI

CODE	PUMPSTATIONS & OPEN LOCATIONS	* CHEM. ANAL.	CATCHM. AREA	DISCHARGES				SALINITIES				RELEASE TO SEA or LAKE		REUSE OF DRAINAGE WTR		CODE
				Q MED	Q DRI	QD/QM	DR.RT	EC	TDS	TDS/EC	SALTLD	DISCH	SALTLD	DISCH	SALTLD	
			10^3fd	10^6m3	10^6m3	ratio	mm/day	mS/cm	g/m3	ratio	10^3tn	10^6m3	10^3tn	10^6m3	10^3tn	
EB01	BILBEIS BRIDGE		61		382		4.1	1.29	926	720	354					EB01
EB02	QALUBEYA BRIDGE	*						1.16	843	727						EB02
EB03	WADI PS	REUSE	304	506	357	0.71	0.8	1.14	800	703	286			357	286	EB03
EB04	WADI RAILWAY BRIDGE				559			1.21	878	725	491					EB04
EB05	SAADA BRIDGE		395		777		1.3	1.08	778	718	605					EB05
EB06	SAADA PS		17	31	24	0.79	0.9	0.93	647	693	16					EB06
EB07	SAUD BRIDGE				899			1.19	841	708	756					EB07
EB08	BAHR BAQAR BRIDGE	CHECK			982			1.20	847	708	831	982	831			EB08
EB09	BAHR BAQAR IRR. PS	REUSE		95	39	0.41		1.03	717	696	28	-39	-28	39	28	EB09
EB10	BAHR BAQAR DRAIN PS		81	156	160	1.03	1.3	6.14	3852	627	618	160	618			EB10
EB11	BAHR BAQAR OUTFALL	* CHECK						1.64	1095	668						EB11
EH14	GEMEEZA BRIDGE				243			1.18	785	668	191					EH14
EH01	SAFT EL QIBLY BRIDGE	* CHECK	210					1.30	888	681						EH01
EH02	MANUT PS	REUSE		334	284	0.85		1.18	813	687	230			284	230	EH02
EH03	SADAQA PS		43	116	112	0.97	1.7	2.01	1286	640	145					EH03
EH04	NIZAM BRIDGE		95		248		1.7	1.29	880	680	218					EH04
EH05	NIZAM PS		45	175	175	1.00	2.5	1.26	845	669	148					EH05
EH15	IDDOWWAR BRIDGE	CHECK			685			1.43	907	634	622					EH15
EH06	BENI ABEID PS		53	307	315	1.03	3.9	1.95	1265	648	398					EH06
EH07	ADD. QASSABY PS		60	359	287	0.80	3.1	2.20	1413	641	406					EH07
EH08	MAIN QASSABY PS		28	274	295	1.08	6.9	3.95	2476	627	731					EH08
EH09	GENEENA PS	REUSE	38	185	197	1.06	3.4	1.27	843	662	166			197	166	EH09
EH10	ERAD PS		57	548	539	0.98	6.2	2.50	1587	634	855					EH10
EH11	BAHR HADUS BRIDGE	CHECK			1612			2.10	1348	642	2172	1612	2172			EH11
EH16	EL ARIN BRIDGE	*	60					1.21	841	696						EH16
EH12	SAFT PS	30% REUSE	175	614	542	0.88	2.0	2.65	1672	631	906	379	634	163	272	EH12
EH13	BAHR HADUS OUTFALL	* CHECK						2.45	1551	634						EH13
EH01	MATARYA PS		50	260	273	1.05	3.6	5.50	3411	620	931	273	931			EH01
ES01	UPPER SERW PS	REUSE	50	184	244	1.33	3.2	0.93	641	688	156			244	156	ES01
ES02	LOWER SERW PS		66	608	625	1.03	6.2	1.61	1053	653	658	625	658			ES02
EF01	FARASQUR PS		20	260	280	1.08	9.1	2.26	1444	640	405	280	405			EF01
	TOTAL RELEASE TO THE SEA or COASTAL LAKE								1456			4272	6221			
	TOTAL REUSE OF DRAINAGE WATER								886					1284	1138	

*) for comments see chapter 3

adjacent to the Damietta Branch of the Nile, is significantly lower than that of the catchments situated in the lower regions and at the ends of the irrigation system. The high salinity of the Bahr Baqar PS catchment (EB10) can be due to the fact that new agricultural lands are leached in this catchment. On the other hand the higher salinity in the north-eastern part of the Eastern Delta may be caused by seepage and reuse of more saline drainage water.

4. THE MIDDLE DELTA

4.1. Main drainage catchments systems

The Middle Delta is divided into a number of main catchment systems. Most of the catchments of these systems are drained through pumping stations (Fig. 5).

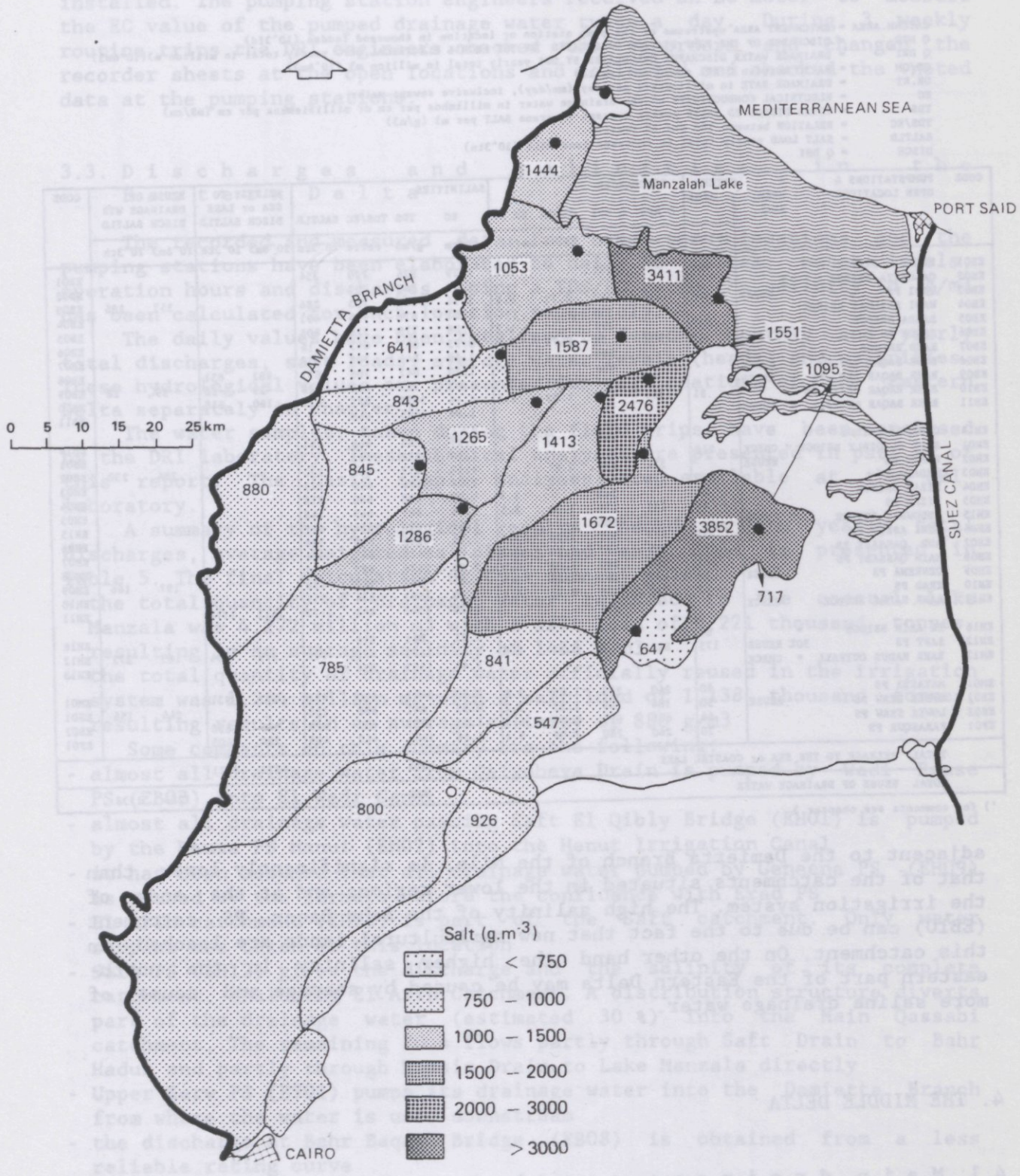


Fig. 4. Average salinity of drainage water in the Eastern Delta in g/m3 salt during 1985

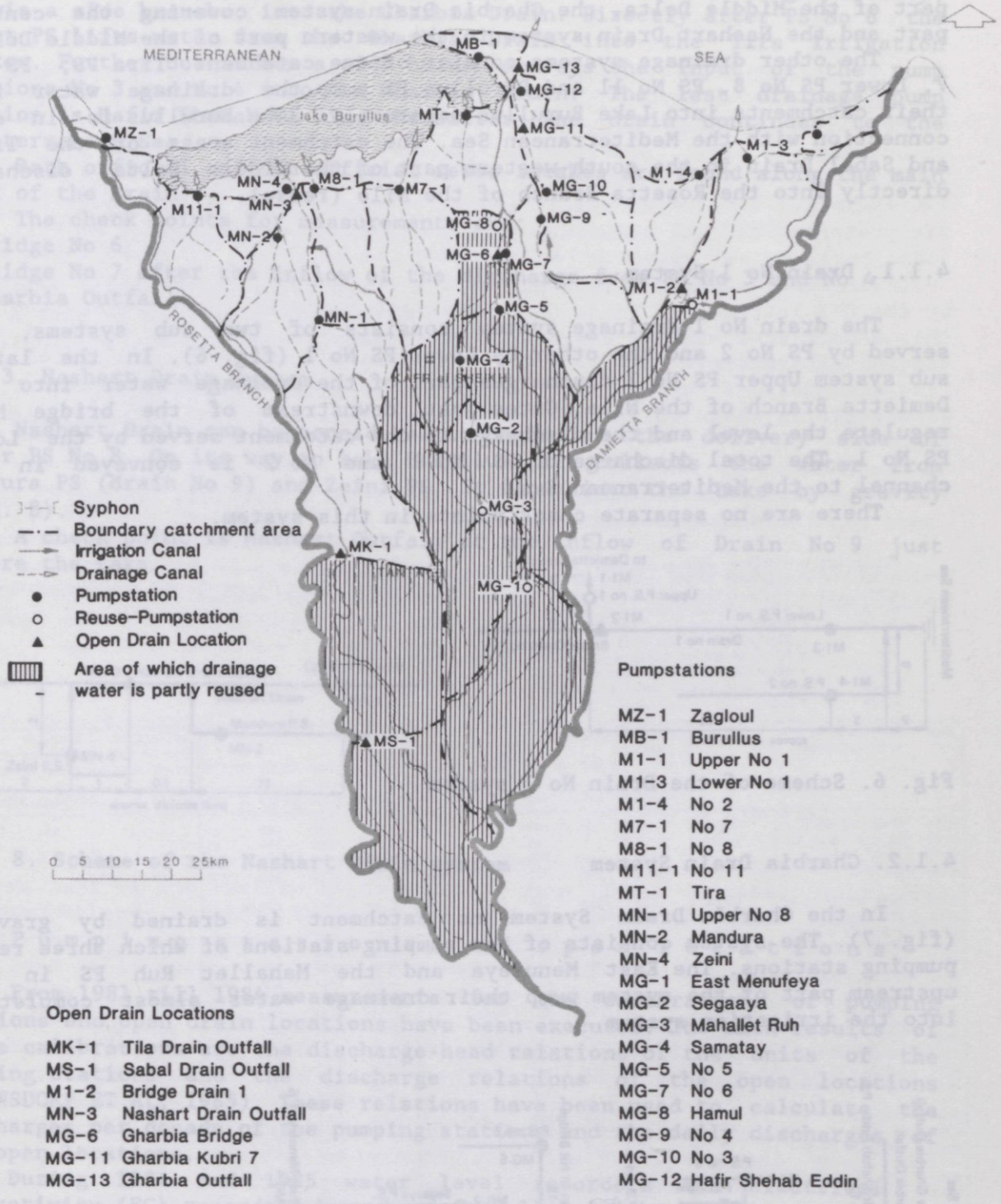


Fig. 5. Survey of catchments and drainage systems in the Middle Delta

The main drain systems are the Drain No 1 system in the north-eastern part of the Middle Delta, the Gharbia Drain system covering the central part and the Nashart Drain system in the western part of the Middle Delta.

The other drainage systems consist of one catchment: Tira PS, PS No 7, Lower PS No 8, PS No 11 and Burullus PS pump the drainage water from their catchments into Lake Burullus separately. Lake Burullus is in open connection with the Mediterranean Sea. The catchment areas of the Tilla and Sabal Drain in the south-western part of the Middle Delta, discharge directly into the Rosetta Branch of the Nile (reuse).

4.1.1. Drain No 1 System

The drain No 1 drainage system consists of two sub systems, one served by PS No 2 and the other by Lower PS No 1 (fig. 6). In the latter sub system Upper PS No 1 discharges part of the drainage water into the Damietta Branch of the Nile. Gates just downstream of the bridge M102 regulate the level and the discharge to the catchment served by the Lower PS No 1. The total discharge of PS No 1 and No 2 is conveyed in one channel to the Mediterranean Sea.

There are no separate check points in this system.

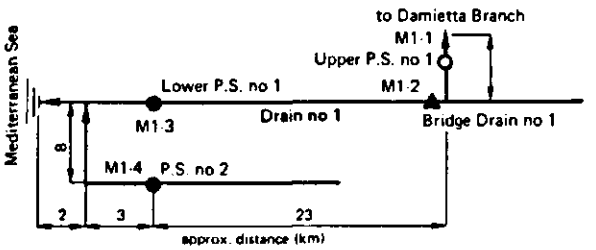


Fig. 6. Scheme of the Drain No 1 system

4.1.2. Gharbia Drain System

In the Gharbia Drain System no catchment is drained by gravity (fig. 7). The system consists of ten pumping stations of which three reuse pumping stations. The East Menufeya and the Mahallet Ruh PS in the upstream part of the system pump their drainage water almost completely into the irrigation system.

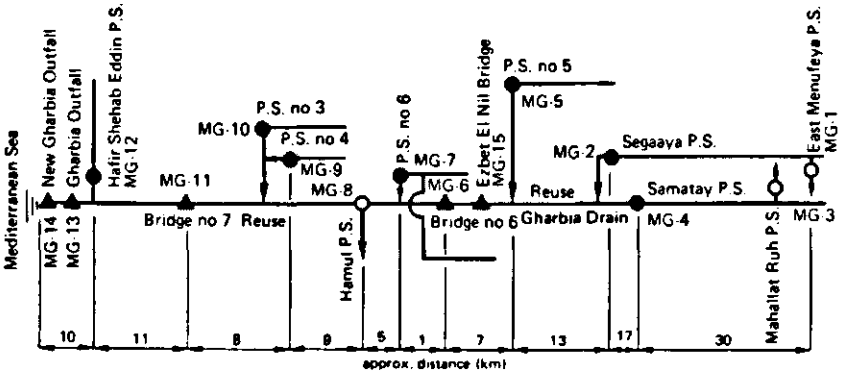


Fig. 7. Scheme of the Gharbia Drain System

The pump stations Samatay, Segaaya, No 5 and No 6 discharge directly, or via a side branche, into the Gharbia Drain. Directly after PS No 6 the Hanut PS lifts water from the Gharbia Drain into the Tira Irrigation System. Further downstream a side branch conveys the input of the pump stations No 3 and No 4 into the Gharbia Drain. The last drainage pump station is Hafir Shehab El Din, whereafter the drain continues to the Mediterranean Sea.

Both official and non-official reuse intakes are found along the main part of the Drain.

The check points for measurements are:

- Bridge No 6
- Bridge No 7 after the inflow of the discharge from PS No 3 and No 4
- Gharbia Outfall

4.1.3. Nashart Drain System

Nashart Drain can be considered to begin at the delivery side of Upper PS No 8. On its way to Lake Burullus it collects the water from Mandura PS (drain No 9) and Zeini PS. It flows into the Lake by gravity (fig. 8).

A check point is Nashart Outfall at the inflow of Drain No 9 just before the Lake.

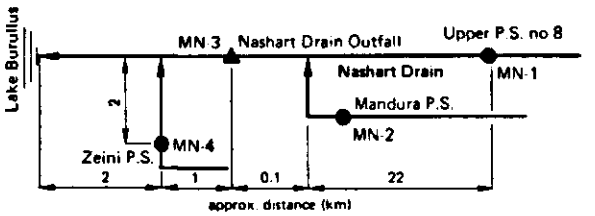


Fig. 8. Scheme of the Nashart Drain system

4.2. Pumping stations and open locations

From 1981 till 1984 measurements for the calibrations of pumping stations and open drain locations have been executed. The main results of these calibrations are the discharge-head relations of the units of the pumping stations and the discharge relations of the open locations (BIJNSDORP ET AL, 1985). These relations have been used to calculate the discharges per decade of the pumping stations and the daily discharges of the open locations.

During 1984 and 1985 water level recorders and electrical conductivity (EC) recorders have been installed at the open locations. At most of the pumping stations time counters for every pump unit have been installed. The pumping station engineers received an EC meter to measure the EC value of the pumped drainage water twice a day. During 3 - weekly routine trips the DRI engineers checked the recorders and changed the recorder sheets at the open locations and collected and checked the noted data at the pumping stations.

4.3. Discharge and salinities in the Middle Delta

The recorded and measured data from the open location and the pumping stations have been elaborated to daily EC values, water levels, operation hours and discharges. Using a TDS/EC ratio the salinity in g/m3 has been calculated for each location separately. The daily values have been totalised to decade, monthly and yearly total discharges, salt loads, average water levels (or heads) and salinities. These hydrological values are presented for all locations of the Middle Delta separately in chapter 7.

The water samples, taken during the field trips, have been analysed by the DRI laboratory. These chemical analyses are presented in part B of this report on a monthly basis. The basic sample analyses are available at the DRI laboratory.

A summary of the hydrological results, based on the yearly total discharges, average weighted salinities and the salt load is presented in Table 6.

Table 6. Summary of discharges, drainage rates, salinities and salt loads of the Middle Delta in 1985

CATCHM.AREA = CATCHMENT AREA upstreams of the pump station or location in thousand feddan (10^3[d)
Q MED = DISCHARGE OF THE PUMP STATION CALCULATED BY THE MECH.& ELECTRICAL DEP. yearly total in million m3(10^6m3)
Q DRI = DRAINAGE WATER DISCHARGE CALCULATED BY DRI yearly total in million m3 (10^6m3)
QD/QM = RATIO between Q DRI and Q MED (ratio)
DR.RT = DRAINAGE RATE in millimeters per day (mm/day), inclusive sewage water
EC = ELECTRICAL CONDUCTIVITY of the drainage water in millimhos per cm or milliSiemens per cm (mS/cm)
TDS = TOTAL DISSOLVED SALTS yearly average in grams SALT per m3 (g/m3)
TDS/EC = RELATION between TDS and EC (ratio)
SALTLD = SALT LOAD yearly total in thousand tons SALT (10^3tn)
DISCH = Q DRI

CODE	PUMPSTATIONS & OPEN LOCATIONS		CATCHM. AREA	DISCHARGES				SALINITIES				RELEASE TO SEA or LAKE		REUSE OF DRAINAGE WTR		CODE
				Q MED	Q DRI	QD/QM	DR.RT	EC	TDS	TDS/EC	SALTLD	DISCH	SALTLD	DISCH	SALTLD	
			10^3fd	10^6m3	10^6m3	ratio	mm/day	mS/cm	g/m3	ratio	10^3tn	10^6m3	10^3tn	10^6m3	10^3tn	
M101	UPPER PS NO 1	REUSE	50	57	63	1.11	0.8	1.44	991	688	63			63	61	M101
M102	BRIDGE DRAIN NO 1	CHECK			91			1.23	853	694	77					M102
M103	LOWER PS NO 1		105	na	828	na	5.1	2.91	1861	639	1540	828	1540			M103
M104	PS NO 2		63	363	373	1.03	3.9	2.83	1822	644	679	373	679			M104
MG01	EAST MENUFEYA PS	REUSE	139	100	105	1.05	0.5	1.23	867	707	91			105	91	MG01
MG02	SEGAAYA PS		75	178	197	1.11	1.7	1.48	1018	690	201	197	201			MG02
MG03	MAHALLET RUH PS	REUSE	70	81	80	0.99	0.7	0.98	689	701	55			80	55	MG03
MG04	SEMATAY PS		55	342	321	0.94	3.8	1.39	935	672	300	321	300			MG04
MG05	PS NO 5		83	194	194	1.00	1.5	1.79	1185	663	230	194	230			MG05
MG06	GHARBIA BRIDGE NO 6	CHECK			831			1.54	1047	678	870					MG06
MG07	PS NO 6		43	137	145	1.06	2.2	3.54	2239	633	325	145	325			MG07
MG08	MAMUL PS	REUSE		292	257	0.88		1.64	1083	660	279	-257	-279	257	279	MG08
MG09	PS NO 4		73	320	286	0.89	2.6	1.60	1038	649	297	286	297			MG09
MG10	PS NO 3		56	252	259	1.03	3.0	2.75	1745	634	452	259	452			MG10
MG11	GHARBIA BRIDGE NO 7	CHECK			834			1.81	1177	650	981					MG11
MG12	NAFIR SNEHAB EL DIN PS		65	327	355	1.09	3.6	9.06	5661	625	2010	355	2010			MG12
MG13	GHARBIA OUTFALL	CHECK			1058			3.70	2355	636	2490					MG13
MT01	TIRA PS		72	369	387	1.05	3.5	6.94	4328	624	1676	387	1676			MT01
M701	PS NO 7		86	286	317	1.11	2.4	3.89	2465	634	782	317	782			M701
M801	LOWER PS NO 8		68	349	249	0.76	2.4	4.83	3043	630	758	249	758			M801
MN01	UPPER PS NO 8		154	272	270	0.99	1.1	1.60	1066	668	288	270	288			MN01
MN02	MANDURA PS		68	196	184	0.94	1.8	2.42	1559	644	287	184	287			MN02
MN03	NASHART OUTFALL	CHECK			na			1.91	1265	662						MN03
MN04	ZEINI PS		22	146	118	0.81	3.5	3.53	2240	635	263	118	263			MN04
M111	PS NO 11		75	506	500	0.99	4.3	1.61	1062	659	531	500	531			M111
MB01	BURULLUS PS		13	62	62	1.00	3.1	14.50	9200	634	570	62	570			MB01
MK01	TILLA OUTFALL	REUSE	140		152		0.7	0.98	694	710	106			152	106	MK01
MS01	SABAL OUTFALL	REUSE	137		120			1.06	775	729	93			120	93	MS01
MZ01	ZAGLOUL PS		18	269	269	1.00	9.7	3.70	2324	628	625	269	625			MZ01
	TOTAL RELEASE TO THE SEA or COASTAL LAKE								2281			5057	11535			
	TOTAL REUSE OF DRAINAGE WATER								882					777	685	

') for comments see chapter 4

The final calculation of this summary gives:

- the total quantity of drainage water released to the coastal Lake Burullus or the Sea was 5,057 million m3, with a salt load of 11,535 thousand tonnes, resulting in an average salinity of 2281 g/m3
- the total quantity of drainage water officially reused in the irrigation system was 777 million m3 with a salt load of 685 thousand tonnes, resulting in an average salinity of 882 g/m3

Some comments on this summary are the following:

- a small quantity of drainage water from East Menufeya (MG01) catchment is flowing freely into the catchment of the Segaaya PS (MG02)
- the Hamul Reuse PS (MG08) is not pumping the drainage water from the Gharbia Drain during the closure period. During this period the salinity of the Gharbia Drain is above average.
- the Burullus catchment (MB01) and the Zagloul PS (MZ01) are included in the measurement network. The data presented are the monthly discharges of the pumping stations as provided by the Mechanical and Electrical Department. The salinities of the year 1986 are used as a first estimation
- at the Sabal Outfall (MS01) insuffient discharge and EC measurements have been done. The yearly discharge and salt load are estimations.

The average salinity of the drainage water of each catchment has been classified and presented in Fig. 9.

The salinities of the drainage water in the high elevated catchments in the southern part and most of the catchments adjacent to the Nile Branches are low compared with the other catchments.

5. THE WESTERN DELTA

5.1. Main drainage catchments systems

The main drain systems are the Edko Drain system, covering the north-eastern part of the Western Delta and the Umum Drain system which is situated between the Edko Drain System and the Nubarya Canal near the Western Desert. The Barsiq PS pumps its drainage water into Lake Edko. Lake Edko is in open connection with the Mediterranean Sea (Fig. 10).

Tabia PS pumps its drainage water, that is very polluted by industrial and household sewage water, directly into the Mediterranean sea. The drainage water from the small catchment Rashid (in the north) is pumped into the Rosetta Branch of the Nile. The Shubraris Area along the Nile is drained by gravity into the Rosetta Branch.

During 1985 drainage excess from the newly reclaimed Nubarya Area was discharged into Lake Mariut as well. In 1986 the Nubarya Drain continues directly to the Mediterrean Sea. Close to the shiplocks in the Nubarya Canal at Amarya City is a diversion structure that will divert high drainage water discharges from the Nubarya Drain into Lake Mariut.

5.1.1. Edko Drain System

In the Edko Drain System four reuse pumping stations Etay El Barud, Dilingat, Khandak El Gharby and Edko Irrigation pump their drainage water into the irrigation system (Fig. 11.). The drainage water from the first

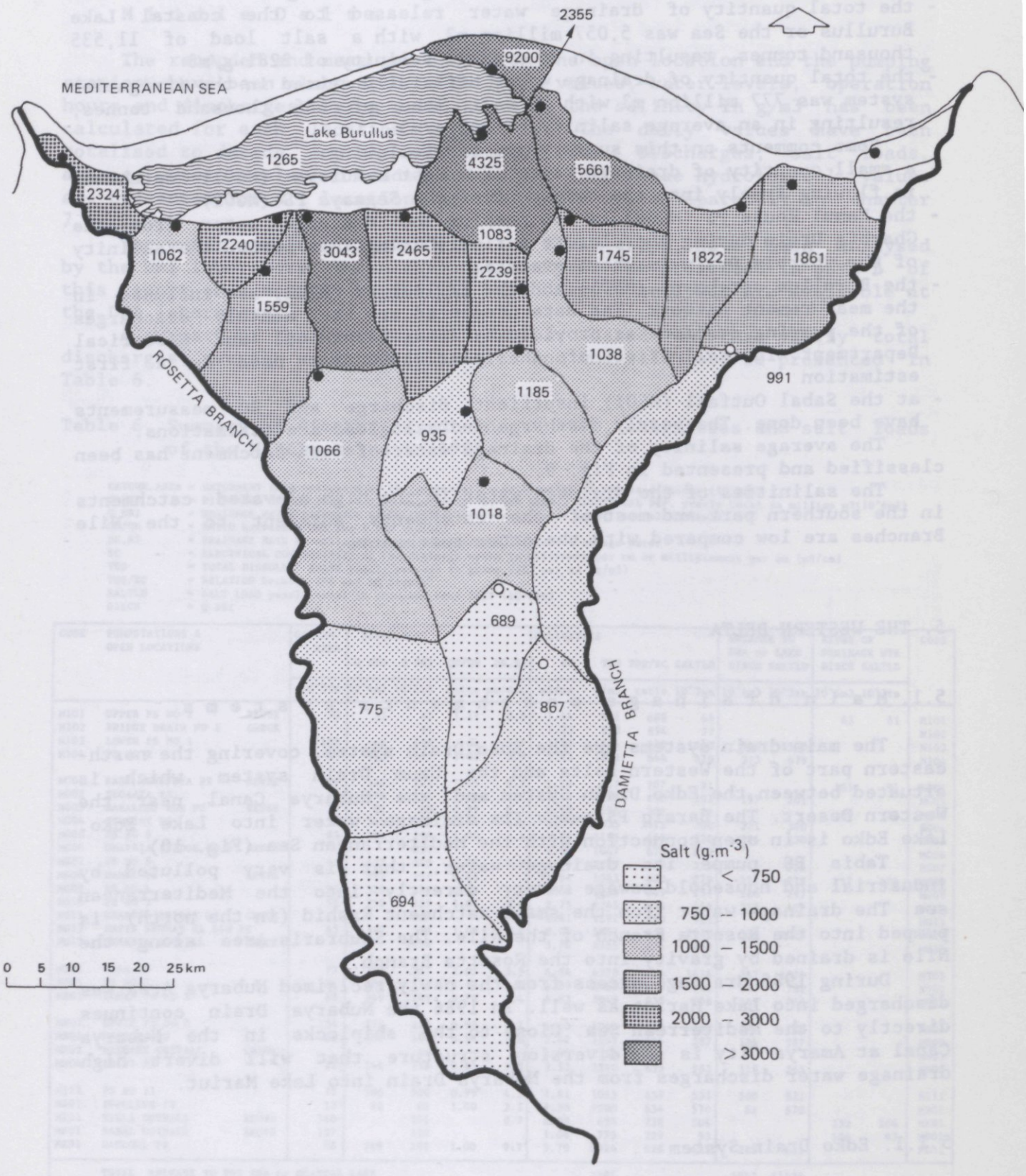
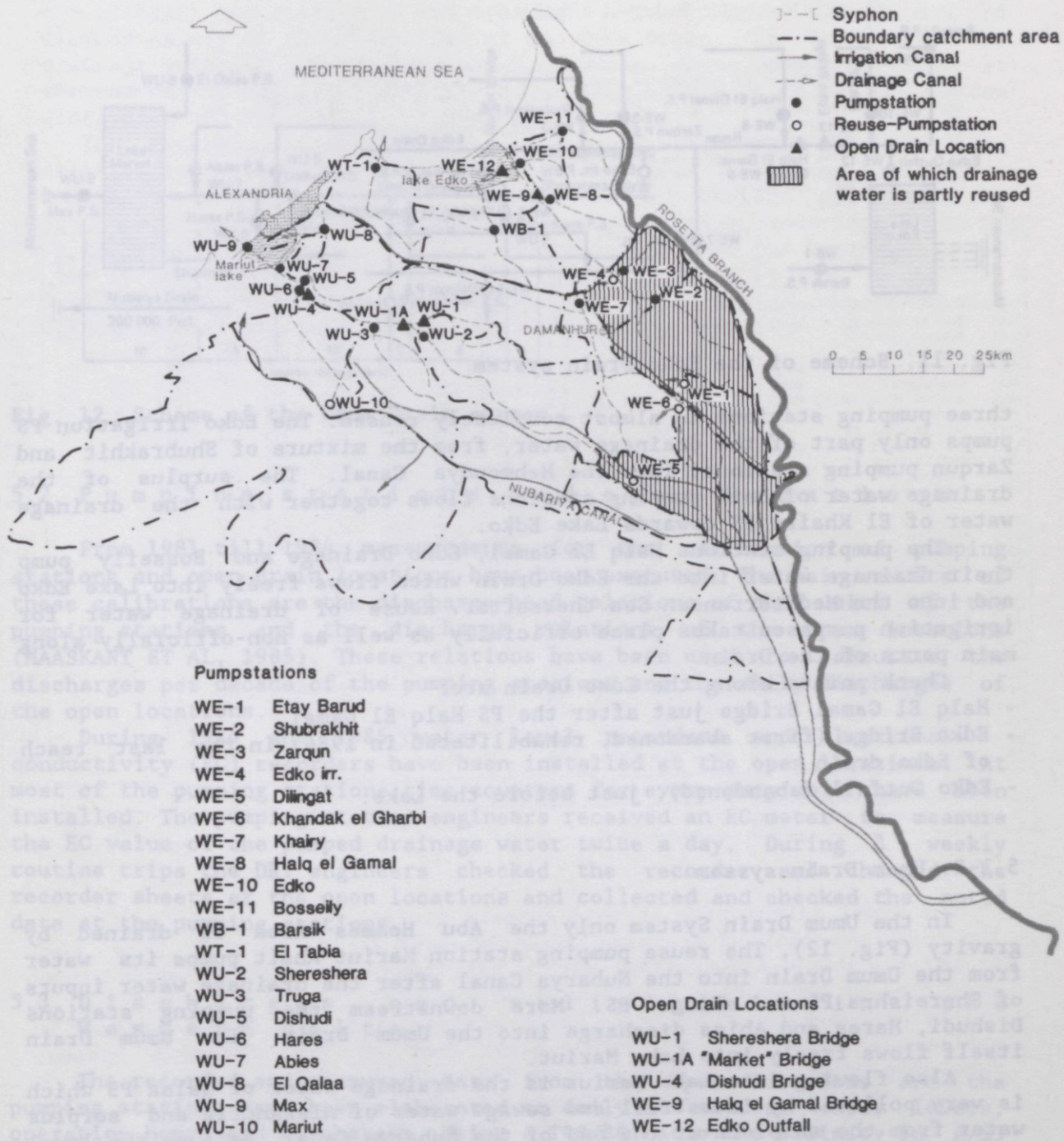


Fig. 9. Average salinity, of the drainage water in the Middle Delta in g/m3 salts during 1985



Pumpstations

WE-1	Etay Barud
WE-2	Shubrakhit
WE-3	Zarqun
WE-4	Edko irr.
WE-5	Dilingat
WE-6	Khandak el Gharbi
WE-7	Khairy
WE-8	Halq el Gamal
WE-10	Edko
WE-11	Bosseily
WB-1	Barsik
WT-1	El Tabia
WU-2	Shereshera
WU-3	Truga
WU-5	Dishudi
WU-6	Hares
WU-7	Abies
WU-8	El Qalaa
WU-9	Max
WU-10	Mariut

Open Drain Locations

WU-1	Shereshera Bridge
WU-1A	"Market" Bridge
WU-4	Dishudi Bridge
WE-9	Halq el Gamal Bridge
WE-12	Edko Outfall

Fig. 10. Survey of catchments and drainage systems in the Western Delta

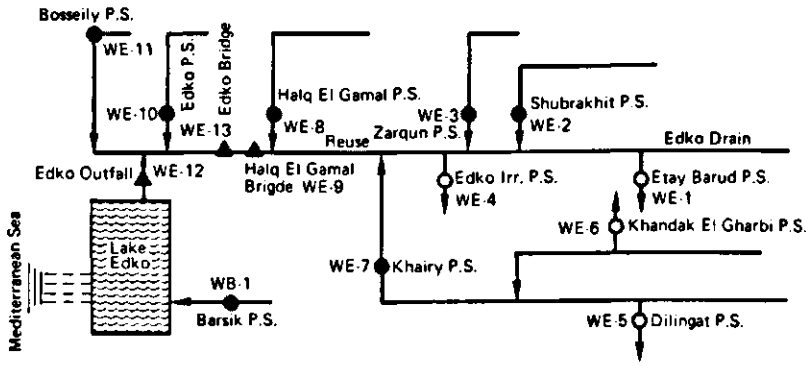


Fig. 11. Scheme of the Edko Drain system

three pumping stations is almost completely reused. The Edko Irrigation PS pumps only part of the drainage water, from the mixture of Shubrakhit and Zarqun pumping stations, into the Mahmoudya Canal. The surplus of the drainage water of both pumping stations flows together with the drainage water of El Khairy PS towards Lake Edko.

The pumping stations Halq El Gamal, Edko Drainage and Bosseily pump their drainage water into the Edko Drain which flows freely into Lake Edko and into the Mediterranean Sea thereafter. Reuse of drainage water for irrigation purposes takes place officially as well as non-officially along main parts of the Drain.

Check points along the Edko Drain are:
- Halq El Gamal Bridge just after the PS Halq El Gamal
- Edko Bridge (first abandoned, rehabilitated in 1986) in the last reach of Edko drain
- Edko Outfall (abandoned), just before the Lake.

5.1.2. Umum Drain system

In the Umum Drain System only the Abu Hommes Area is drained by gravity (Fig. 12). The reuse pumping station Mariut Khalt pumps its water from the Umum Drain into the Nubarya Canal after the drainage water inputs of Shereishra PS and Truga PS. More downstream the pumping stations Dishudi, Hares and Abies discharge into the Umum Drain. The Umum Drain itself flows freely into Lake Mariut.

Also flowing into Lake Mariut is the drainage water of Qalaa PS which is very polluted by industrial and sewage water of Alexandria and surplus water from the shiplock at the end of the Nubarya Canal. Because the level of Lake Mariut is about 2 m below Mean Sea Level the drainage water from Lake Mariut is pumped by El Max PS into the Mediterranean Sea.

Reuse of drainage water takes place along the whole Umum Drain. The plans of the Ministry of Irrigation include the use of one billion m3 of Umum Drain water by mixing it with the water of Nubarya Canal at km 46.

Three check points are defined:
- Shereishra Bridge giving the salinity of drainage water from the Abu Hommes Area
- Shereishra Market Bridge, measuring the discharge of the Abu Hommes area and Sherishra PS
- Dishudi Bridge, just before the input of Hares and Dushudi PS

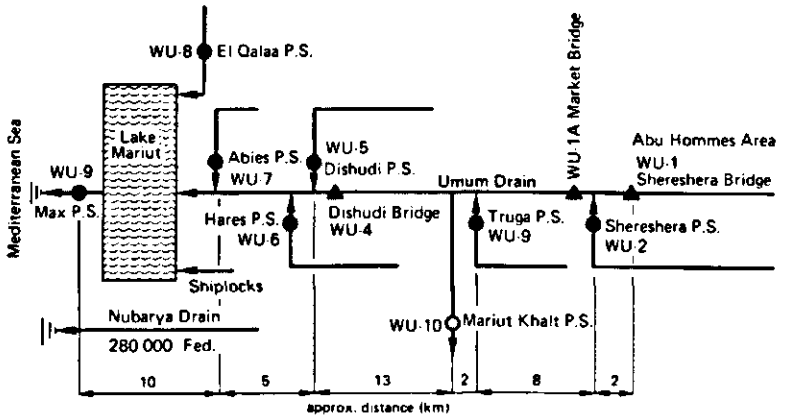


Fig. 12. Scheme of the Umum Drain system

5.2. Pumping stations and open locations

From 1981 till 1984 measurements for the calibration of pumping stations and open drain locations have been executed. The main results of these calibrations are the discharge-head relations of the units of the pumping stations and the discharge relations of the open locations (MAASKANT ET AL, 1985). These relations have been used to calculate the discharges per decade of the pumping stations and the daily discharges of the open locations.

During 1984 and 1985 water level recorders and electrical conductivity (EC) recorders have been installed at the open locations. At most of the pumping stations time counters for every pump unit have been installed. The pumping station engineers received an EC meter to measure the EC value of the pumped drainage water twice a day. During 3 - weekly routine trips the DRI engineers checked the recorder and changed the recorder sheets at the open locations and collected and checked the noted data at the pumping stations.

5.3. Discharges and salinities in the Western Delta

The recorded and measured data from the open locations and the pumping stations have been elaborated to daily EC values, water levels, operation hours and discharges. Using a TDS/EC ratio the salinity in g/m3 has been calculated for each location separately. The daily values have been totalised to decade, monthly and yearly total discharges, salt loads, average water levels (heads) and salinities. These hydrological values are presented for all locations of the Western Delta separately in chapter 8.

The water samples, taken during the field trips, have been analysed by the DRI laboratory. These chemical analyses are presented on a monthly basis in part B of this report. The basic sample analyses are available at the DRI laboratory.

A summary of the hydrologial results, based on the yearly total discharges, average weighted salinities and salt load is presented in Table 7.

Table 7. Summary of discharges, drainage rates, salinities and salt loads of the Western Delta in 1985

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Q MED = DISCHARGE OF THE PUMP STATION CALCULATED BY THE MECH.& ELECTRICAL DEP. yearly total in million m3(10^6m3)
Q DRI = DRAINAGE WATER DISCHARGE CALCULATED BY DRI yearly total in million m3 (10^6m3)
QD/QM = RATIO between Q DRI and Q MED (ratio)
DR.RT = DRAINAGE RATE in millimetere per day (mm/day), inclusive sewage water
EC = ELECTRICAL CONDUCTIVITY of the drainage water in millimhos per cm or millisiemens per cm (mS/cm)
TDS = TOTAL DISSOLVED SALTS yearly average in grams SALT per m3 (g/m3)
TDS/EC = RELATION between TDS and EC (ratio)
SALTLD = SALT LOAD yearly total in thousand tons SALT (10^3tn)
DISCH = Q DRI

CODE	PUMPSTATIONS & OPEN LOCATIONS		CATCHM. AREA	DISCHARGES				SALINITIES				RELEASE TO SEA or LAKES		REUSE OF DRAINAGE WTR		CODE
				Q MED	Q DRI	QD/QM	DR.RT	EC	TDS	TDS/EC	SALTLD	DISCH	SALTLD	DISCH	SALTLD	
			10^3fd	10^6m3	10^6m3	ratio	mm/day	mS/cm	g/m3	ratio	10^3tn	10^6m3	10^3tn	10^6m3	10^3tn	
WE01	ETAY EL BARUD PS	REUSE	24	86	84	0.98	2.3	1.04	716	687	60			84	60	WE01
WE02	SHUBRAKHIT PS		78	294	252	0.86	2.1	1.09	746	682	188	252	188			WE02
WE03	ZARQUN PS		34	218	205	0.94	3.9	1.32	866	656	178	205	178			WE03
WE04	EDKO IRRIGATION PS	REUSE		304	302	0.99		1.11	762	685	230	-302	-230	302	230	WE04
WE05	DILINGAT PS	REUSE	70	222	201	0.91	1.9	1.02	727	713	146			201	146	WE05
WE06	KHANDAK EL GHARBY PS	REUSE	38	76	66	0.87	1.1	1.06	742	697	49			66	49	WE06
WE07	KHAIRY PS		57	207	163	0.79	1.9	1.11	766	690	125	163	125			WE07
WE08	NALQ EL GAMAL PS		45.5	423	256	0.61	3.7	2.10	1372	652	351	256	351			WE08
WE09	NALQ EL GAMAL BRIDGE	CHECK			687			1.73	1160	671	796					WE09
WE10	EDKO DRAINAGE PS		18	161	160	0.99	5.8	3.38	2158	638	345	160	345			WE10
WE11	BOSSEILY PS		25	383	364	0.95	9.5	2.04	1323	650	481	364	481			WE11
WE12	EDKO OUTFALL	CHECK														WE12
WB01	BARSIQ PS		45	402	217	0.54	3.1	3.62	2359	651	512	217	512			WB01
WT01	TABIA PS		50	704	683	0.97	8.9	2.23	1472	660	1006	683	1006			WT01
WR01	BORG RASHID PS		2.5			ERROR	0.0									WR01
WN11	BOUSTAIN P.S.	REUSE		4	4	1.00								4		WN11
WU01	SHERESHERA BRIDGE		46		na		na	2.15	1434	667						WU01
WU02	SHERESHERA PS		180	544	551	1.01	2.0	2.58	1733	672	954					WU02
WU1A	SHERESHERA MARKET BR.				564			2.53	1653	653	932					WU1A
WU03	TRUGA PS		103	599	598	1.00	3.8	3.54	2353	664	1407					WU03
WU10	MARIUT KHALT PS	REUSE		148	141	0.95		3.22	2129	661	300			141	300	WU10
WU04	DISHUDI BRIDGE	CHECK			714			3.22	2129	661	1521					WU04
WU05	DISHUDI PS		33	289	310	1.07	6.1	5.01	3211	641	995					WU05
WU06	NARES PS		62	638	488	0.76	5.1	11.33	7389	652	3602					WU06
WU07	ABIES PS		8	68	65	0.96	5.3	6.07	4032	664	263					WU07
WU08	QALAA PS		14	234	228	0.97	10.6	2.93	1869	638	427					WU08
WU09	MAX PS		726	2945	2315	0.79	2.1	8.77	5615	640	12997	2315	12997			WU09
	TOTAL RELEASE TO THE SEA or COASTAL LAKES								3699			4313	15953			
	TOTAL REUSE OF DRAINAGE WATER								984					798	785	

') for comments see chapter 5

The final calculation of this summary gives:

- the total quantity of drainage water released to the coastal Lake Edko or the Sea was 4,313 million, with a salt load of 15,953 thousand tonnes resulting in an average salinity of 3699 g/m3
- the total quantity of drainage water officially reused in the irrigation system was 798 million m3, with a salt load of 785 thousand tonnes, resulting in an average salinity of 984 g/m3

Some comments on this summary are the following:

- directly downstream of Halq El Gamal Bridge (WE09) an official irrigation intake diverts drainage water from the Edko Drain to the irrigation system in the catchment of Edko Drainage PS (WE10)
- after the Bosseily PS (WE11) the farmers reuse drainage water from the Edko Drain
- at Shereishra Bridge (WU01) the quantity and the quality of the drainage water of the Abu Hommes Area have been measured
- at Shereishra Market Bridge (WU1A) the confluence of Abu Hommes Area (WU01) and Shereishra area (WU02) is measured
- the Mariut Khalt Reuse PS pumps part of the drainage water of the Umum Drain into the Nubarya Canal. No quality measurements have been done at this pumping station. It is assumed that the salinity of this water is

equal to the drainage water at Dishudi Bridge (WU04)
- the quantity and quality of the drainage water pumped by El Max PS depends mainly on the discharges of the Umum Drain, El Qalaa PS, the drainage water of Nubarya Area and the surplus water of the shiplock at the end of Nubarya Canal. The catchment area of Max PS is 726,000 feddan (including 280,000 feddan Nubarya Area).

The average salinity of the drainage water per catchment is classified and presented in Fig. 13. The salinities of the drainage water in the high elevated catchments in the south - eastern part and the catchments adjacent to the Rosetta Branch of the Nile are low compared with the other catchments. The quality and quantity of the drainage water of the Tabia PS and the Qalaa PS are directly effected by the industrial and sewage water from the city of Alexandria. Therefore no comparison with the agricultural drainage water is possible.

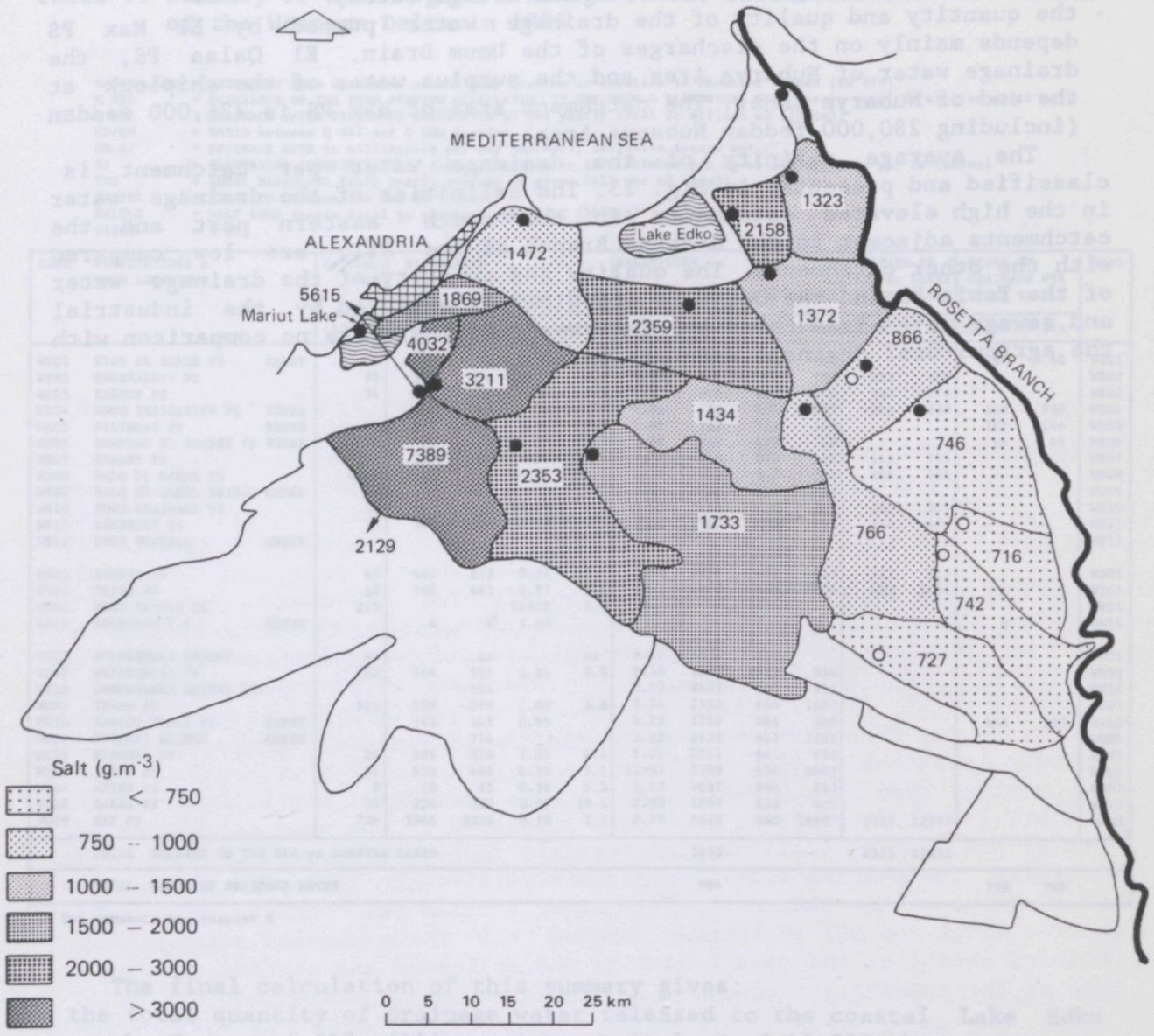

Fig. 13. Average salinity of drainage water in the Western Delta in g/m3 salts during 1985

6. DISCHARGES AND SALINITIES EASTERN DELTA DURING 1985

EB01 BILBEIS BRIDGE 1985

Discharge relation : Q = 10.20*(W - 5.08) TDS/EC = 720

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	6.24	31.62	1.40	1007	31.84
FEB	6.25	28.89	1.30	935	27.03
MAR	6.24	32.31	1.30	935	30.23
APR	6.16	29.26	1.40	1007	29.46
MAY	6.14	29.27	1.20	863	25.27
JUN	6.17	28.55	1.30	935	26.71
JUL	6.22	31.12	1.20	863	26.87
AUG	6.35	34.15	1.30	935	31.95
SEP	6.33	33.00	1.30	935	30.87
OCT	6.35	34.79	1.20	863	30.03
NOV	6.36	33.79	1.25	899	30.39
DEC	6.37	35.26	1.30	935	32.99
YEAR	6.27	382.01	1.29	926	353.64
MIN	6.14	28.55	1.20	863	25.27
MAX	6.37	35.26	1.40	1007	32.99

Results based mainly on incidental measurements

EB03 WADI P.S. 1985

All units : Q = 7.63 - 1.14 * head TDS/EC = 703

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	36.35	1617	2.17	29.77	1.17	827	24.65
FEB	8.58	387	2.50	6.65	1.23	869	5.77
MAR	48.81	2267	2.88	35.50	1.25	885	31.43
APR	33.90	1518	3.08	22.49	1.12	791	17.81
MAY	41.94	1925	2.97	29.44	1.13	797	23.49
JUN	45.65	2148	3.22	30.46	1.13	796	24.27
JUL	55.62	2608	3.37	35.44	1.12	791	28.06
AUG	56.88	2760	3.32	38.21	1.13	796	30.45
SEP	56.31	2630	3.02	39.57	1.13	796	31.52
OCT	42.04	2119	3.17	30.03	1.24	876	26.34
NOV	38.58	1769	2.77	28.35	1.20	843	23.91
DEC	40.85	1874	2.49	31.28	0.82	576	18.06
YEAR	505.51	23622	2.91	357.19	1.14	800	285.76
MIN	8.58	387	2.17	6.65	0.82	576	5.77
MAX	56.88	2760	3.37	39.57	1.25	885	31.52

EB04 WADI RAILWAY BRIDGE 1985

Discharge relation : Q = 20.68*(W - 3.44) TDS/EC = 725

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	4.65	66.70	1.40	1014	67.65
FEB	4.38	46.67	1.20	869	40.55
MAR	4.32	48.31	1.10	797	38.50
APR	4.11	35.77	1.20	869	31.08
MAY	4.15	39.42	1.20	869	34.25
JUN	4.22	42.01	1.10	797	33.47
JUL	4.27	45.71	1.20	869	39.72
AUG	4.17	40.95	1.20	869	35.58
SEP	4.28	45.04	1.20	869	39.14
OCT	4.10	37.06	1.30	942	34.91
NOV	4.39	51.03	1.30	942	48.07
DEC	4.52	60.18	1.10	797	47.96
YEAR	4.30	558.85	1.21	878	490.88
MIN	4.10	35.77	1.10	797	31.08
MAX	4.65	66.70	1.40	1014	67.65

EB05 SAADA BRIDGE 1985

Discharge relation : Q = 19.46*(W - 0.70) TDS/EC = 718

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	2.27	82.00	0.90	646	52.98
FEB	1.94	57.62	1.12	803	46.27
MAR	2.02	68.24	1.05	752	51.41
APR	1.80	55.35	1.00	717	39.73
MAY	1.80	57.43	1.03	738	42.44
JUN	1.82	56.39	1.00	717	40.47
JUL	1.89	62.01	1.00	717	44.51
AUG	1.88	61.69	1.10	788	48.66
SEP	1.99	64.81	1.30	932	60.48
OCT	1.87	61.27	1.10	788	48.33
NOV	2.04	67.65	1.20	860	58.25
DEC	2.28	82.72	1.20	860	71.22
YEAR	1.97	777.18	1.08	778	604.75
MIN	1.80	55.35	0.90	646	39.73
MAX	2.28	82.72	1.30	932	71.22

EB06 SAADA P.S. 1985

All units : Q = 0.74 - 0.00 * head TDS/EC = 693

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	2.55	763	N A	2.03	1.15	799	1.61
FEB	1.86	567	N A	1.51	1.30	901	1.35
MAR	2.60	778	N A	2.07	1.18	817	1.68
APR	2.47	739	N A	1.96	1.01	705	1.38
MAY	2.10	629	N A	1.67	1.06	734	1.22
JUN	2.11	632	N A	1.68	1.07	740	1.24
JUL	2.87	938	N A	2.49	0.77	537	1.33
AUG	2.71	823	N A	2.19	0.75	521	1.13
SEP	2.73	598	N A	1.59	0.67	467	0.73
OCT	2.87	958	N A	2.55	0.99	685	1.74
NOV	2.57	761	N A	2.02	0.77	535	1.07
DEC	3.37	1030	N A	2.70	0.70	487	1.34
YEAR	30.81	9216	N A	24.46	0.93	647	15.82
MIN	1.86	567	0.00	1.51	0.67	467	0.73
MAX	3.37	1030	0.00	2.70	1.30	901	1.74

In first quarter EC from routine measurements

EB07 SAUD BRIDGE 1985

Discharge relation : Q = 18.68*(W +0.52) TDS/EC = 708

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	1.34	92.75	1.00	707	65.66
FEB	1.03	69.67	1.30	919	64.07
MAR	1.06	78.87	1.20	848	66.94
APR	0.86	67.05	1.30	919	61.66
MAY	0.85	68.59	1.20	848	58.20
JUN	0.82	64.65	1.20	848	54.86
JUL	0.91	71.33	1.20	848	60.53
AUG	0.92	72.27	1.23	871	62.94
SEP	1.03	75.24	1.10	777	58.52
OCT	0.94	73.30	1.20	848	62.21
NOV	1.08	77.64	1.20	848	65.89
DEC	1.23	87.97	1.20	848	74.65
YEAR	1.01	899.33	1.19	841	756.13
MIN	0.82	64.65	1.00	707	54.86
MAX	1.34	92.75	1.30	919	74.65

EB08 B.BAQAR BRIDGE 1985

Discharge relation : Q = 25.99*(W +0.26) TDS/EC = 708

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	1.20	101.60	1.10	778	79.12
FEB	1.19	90.88	1.30	920	83.63
MAR	0.88	86.10	1.20	849	73.15
APR	0.79	72.64	1.30	920	66.85
MAY	0.74	69.30	1.20	849	58.87
JUN	0.69	63.83	1.20	849	54.22
JUL	0.78	72.65	1.20	849	61.71
AUG	0.85	77.67	1.10	778	60.48
SEP	0.93	79.94	1.10	778	62.25
OCT	0.87	78.57	1.30	920	72.30
NOV	0.99	83.96	1.30	920	77.27
DEC	1.24	104.80	1.10	778	81.61
YEAR	0.93	981.94	1.20	847	831.46
MIN	0.69	63.83	1.10	778	54.22
MAX	1.24	104.80	1.30	920	83.63

Discharge obtained from a less reliable Q-h curve

EB09 B. BAQAR IRR. P.S. 1985

All units : Q = 0.36 - 0.00 * head TDS/EC = 696

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	8.76	2919	N A	3.78	0.91	633	2.38
FEB	6.31	2060	N A	2.66	1.17	817	2.17
MAR	7.30	2183	N A	2.82	0.96	670	1.88
APR	6.81	1845	N A	2.39	1.14	795	1.90
MAY	6.32	1880	N A	2.43	1.20	839	2.04
JUN	7.22	1757	N A	2.27	1.20	836	1.90
JUL	9.83	3467	N A	4.49	1.03	718	3.22
AUG	8.63	2877	N A	3.72	1.14	793	2.95
SEP	8.16	2721	N A	3.52	1.02	711	2.50
OCT	9.08	3025	N A	3.92	1.14	793	3.10
NOV	8.37	2787	N A	3.61	1.04	728	2.62
DEC	8.36	2784	N A	3.60	0.58	402	1.45
YEAR	95.15	30305	N A	39.21	1.03	717	28.11
MIN	6.31	1757	0.00	2.27	0.58	402	1.45
MAX	9.83	3467	0.00	4.49	1.20	839	3.22

From August on pumphours from MED

EB10 B. BAQAR P.S. 1985

All units : Q = 6.11 - 0.00 * head TDS/EC = 627

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	15.69	714	1.82	15.70	6.40	4015	63.06
FEB	7.57	330	1.67	7.25	9.34	5858	42.52
MAR	11.75	546	1.71	12.00	6.58	4128	49.58
APR	10.29	458	1.65	10.07	5.74	3599	36.26
MAY	10.63	493	1.72	10.84	5.24	3285	35.62
JUN	7.26	382	1.65	8.40	6.89	4324	36.33
JUL	12.54	602	1.77	13.24	6.08	3811	50.47
AUG	13.18	624	1.77	13.72	5.78	3624	49.74
SEP	14.96	698	1.78	15.35	5.67	3555	54.58
OCT	14.94	679	1.70	14.93	6.00	3764	56.21
NOV	15.58	752	1.72	16.54	6.62	4153	68.70
DEC	21.60	1020	1.74	22.43	5.33	3346	75.09
YEAR	155.99	7298	1.72	160.47	6.14	3852	618.16
MIN	7.26	330	1.65	7.25	5.24	3285	35.62
MAX	21.60	1020	1.82	22.43	9.34	5858	75.09

EH02 HANUT P.S. 1985

All units : Q = 4.82 - 0.00 * head TDS/EC = 687

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	14.78	762	2.57	13.22	1.36	934	12.34
FEB	8.96	418	1.70	7.25	1.06	727	5.26
MAR	24.89	1139	2.30	19.76	1.23	847	16.75
APR	27.34	1392	2.80	24.15	1.43	987	23.83
MAY	33.55	1714	3.20	29.74	1.04	717	21.33
JUN	32.55	1692	3.30	29.35	1.11	763	22.43
JUL	35.25	1797	2.90	31.18	1.11	763	23.80
AUG	33.81	1657	2.80	28.75	1.28	880	25.32
SEP	41.67	1963	2.43	34.06	1.15	795	27.11
OCT	30.83	1480	2.16	25.68	1.06	732	18.83
NOV	21.92	999	2.05	17.33	1.28	880	15.27
DEC	28.52	1330	2.47	23.07	1.14	788	18.19
YEAR	334.07	16343	2.56	283.54	1.18	813	230.46
MIN	8.96	418	1.70	7.25	1.04	717	5.26
MAX	41.67	1963	3.30	34.06	1.43	987	27.11

EH03 SADAQA P.S. 1985

All units : Q = 5.78 - 0.61 * head TDS/EC = 640

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	10.75	607	1.32	10.84	1.70	1089	11.81
FEB	3.92	213	1.12	3.90	2.45	1568	6.11
MAR	7.43	406	1.23	7.34	2.19	1403	10.30
APR	7.42	391	1.16	7.13	2.02	1295	9.24
MAY	7.22	395	1.21	7.16	2.09	1337	9.59
JUN	9.61	392	1.21	7.11	1.99	1276	9.07
JUL	10.96	609	1.26	10.89	2.38	1522	16.58
AUG	12.65	671	1.17	12.23	1.74	1113	13.61
SEP	13.84	769	1.25	13.88	1.85	1186	16.47
OCT	12.78	710	1.23	12.84	1.79	1145	14.70
NOV	8.53	481	1.10	8.84	2.13	1365	12.08
DEC	10.44	560	1.13	10.21	2.29	1465	14.97
YEAR	115.55	6204	1.20	112.37	2.01	1286	144.53
MIN	3.92	213	1.10	3.90	1.70	1089	6.11
MAX	13.84	769	1.32	13.88	2.45	1568	16.58

From July through October EC from routine measurements

EH04 NIZAM BRIDGE 1985

Discharge relation : Q = 7.03*(W - 0.30) TDS/EC = 680

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	1.53	22.77	2.20	1495	34.04
FEB	1.00	11.47	2.00	1359	15.59
MAR	1.36	19.84	1.30	883	17.51
APR	1.25	17.25	1.30	883	15.23
MAY	1.29	18.62	1.00	679	12.65
JUN	1.36	19.22	1.00	679	13.06
JUL	1.59	24.55	1.10	747	18.33
AUG	1.67	25.89	1.20	815	21.10
SEP	1.70	25.53	1.30	883	22.54
OCT	1.55	23.43	1.10	747	17.49
NOV	1.21	16.61	1.20	815	13.53
DEC	1.49	22.49	1.10	747	16.79
YEAR	1.42	247.67	1.29	880	217.86
MIN	1.00	11.47	1.00	679	12.65
MAX	1.70	25.89	2.20	1495	34.04

EH05 NIZAM P.S. 1985

All units : Q = 4.27 - 0.62 * head TDS/EC = 669

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	16.67	1352	1.33	16.70	1.40	937	15.66
FEB	7.04	559	1.03	7.29	2.30	1544	11.25
MAR	11.42	894	1.15	11.43	1.43	957	10.94
APR	12.84	1019	1.10	13.15	1.37	917	12.07
MAY	12.76	1013	1.10	13.08	1.08	722	9.45
JUN	14.41	1147	1.16	14.65	1.12	750	11.00
JUL	15.90	1264	1.22	15.97	1.25	842	13.45
AUG	18.18	1443	1.27	18.07	1.29	863	15.62
SEP	20.86	1660	1.30	20.70	1.20	802	16.62
OCT	17.83	1404	1.36	17.30	1.07	719	12.45
NOV	10.91	861	1.28	10.77	1.20	805	8.68
DEC	16.35	1265	1.13	16.24	1.01	675	10.97
YEAR	175.17	13881	1.20	175.35	1.26	845	148.16
MIN	7.04	559	1.03	7.29	1.01	675	8.68
MAX	20.86	1660	1.36	20.70	2.30	1544	16.62

EH06 BANI EBEID P.S. 1985

All units : Q = 7.52 - 1.24 * head TDS/EC = 648

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	25.97	1443	2.00	26.18	2.51	1625	42.55
FEB	12.51	695	2.00	12.61	1.94	1256	15.83
MAR	21.60	1200	2.00	21.77	2.70	1749	38.07
APR	19.55	1086	1.80	20.67	1.74	1127	23.30
MAY	19.28	1071	1.80	20.38	1.85	1198	24.42
JUN	21.02	1168	2.00	21.19	1.47	951	20.16
JUL	31.03	1724	1.70	33.58	2.13	1379	46.32
AUG	36.52	2029	2.10	35.90	1.97	1276	45.81
SEP	35.06	1948	1.80	37.08	1.78	1155	42.84
OCT	29.66	1648	2.00	29.90	1.73	1120	33.48
NOV	23.20	1289	1.90	23.96	1.90	1231	29.48
DEC	31.19	1733	2.00	31.44	1.76	1143	35.93
YEAR	306.59	17034	1.92	314.66	1.95	1265	398.19
MIN	12.51	695	1.70	12.61	1.47	951	15.83
MAX	36.52	2029	2.10	37.08	2.70	1749	46.32

Pumphours from MED; EC from routine measurements

EH07 ADD. QASSABI P.S. 1985

All units : Q = 6.01 - 0.00 * head TDS/EC = 641

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	24.46	906	2.45	19.60	2.38	1530	30.01
FEB	11.26	417	2.26	9.02	2.45	1575	14.21
MAR	25.33	938	2.18	20.29	2.04	1307	26.55
APR	22.60	837	2.20	18.10	2.64	1691	30.64
MAY	21.11	782	2.27	16.91	2.02	1300	22.00
JUN	25.95	961	2.08	20.79	2.37	1520	31.62
JUL	39.69	1470	1.75	31.80	2.27	1454	46.27
AUG	46.95	1739	1.85	37.62	2.27	1454	54.70
SEP	46.14	1709	1.86	36.97	2.25	1441	53.30
OCT	38.23	1410	2.04	30.50	1.87	1203	36.73
NOV	23.57	873	1.76	18.88	2.28	1466	27.70
DEC	33.53	1242	2.03	26.87	1.88	1205	32.41
YEAR	358.82	13284	2.06	287.35	2.20	1413	406.14
MIN	11.26	417	1.75	9.02	1.87	1203	14.21
MAX	46.95	1739	2.45	37.62	2.64	1691	54.70

EH08 MAIN QASSABI P.S. 1985

un. 1,2 : Q = 5.34 - 0.24 * head TDS/EC = 627
un. 3 : Q = 8.19 - 0.58 * head

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	19.01	1056	2.80	18.52	4.30	2696	49.92
FEB	9.50	528	2.78	8.95	4.40	2758	24.68
MAR	16.22	901	2.58	15.49	4.80	3009	46.86
APR	16.90	939	2.09	16.36	5.30	3323	54.35
MAY	16.88	938	2.36	16.65	3.80	2382	39.66
JUN	24.69	1368	N A	26.71	5.10	3197	84.47
JUL	32.49	1805	1.75	36.78	4.30	2696	99.15
AUG	33.62	1869	1.65	38.48	3.70	2319	89.26
SEP	31.88	1771	1.40	37.02	3.30	2069	76.59
OCT	27.67	1607	1.90	32.15	3.50	2194	70.54
NOV	20.00	1117	2.19	21.52	3.50	2194	47.21
DEC	24.71	1360	2.38	26.55	2.90	1818	48.26
YEAR	273.57	15259	N A	295.18	3.95	2476	730.95
MIN	9.50	528	1.40	8.95	2.90	1818	24.68
MAX	33.62	1869	2.80	38.48	5.30	3323	99.15

Pumphours from MED; EC from routine measurements

EH09 GENEENA P.S. 1985

All units : Q = 6.63 - 0.84 * head TDS/EC = 662

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	12.62	756	1.67	14.25	1.38	915	13.05
FEB	13.16	781	1.78	14.45	2.70	1789	25.87
MAR	14.80	1069	1.64	20.11	1.11	737	14.84
APR	11.30	635	1.51	12.23	1.29	857	10.48
MAY	8.53	452	1.39	8.89	1.30	865	7.69
JUN	14.83	840	1.57	16.01	1.09	721	11.56
JUL	22.09	1250	1.69	23.36	1.09	724	16.94
AUG	24.50	1389	1.99	24.77	0.99	660	16.37
SEP	22.41	1248	2.04	22.09	0.98	652	14.42
OCT	15.53	852	2.00	15.08	1.18	785	11.86
NOV	11.70	654	1.78	12.08	1.41	934	11.29
DEC	13.46	752	1.86	13.68	1.29	853	11.68
YEAR	184.93	10678	1.74	197.00	1.27	843	166.05
MIN	8.53	452	1.39	8.89	0.98	652	7.69
MAX	24.50	1389	2.04	24.77	2.70	1789	25.87

EH10 ERAD P.S. 1985

All units : Q = 12.42 - 1.52 * head TDS/EC = 634

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	38.87	1352	2.91	39.10	2.89	1831	71.62
FEB	22.22	770	3.00	21.78	2.65	1679	36.56
MAR	40.63	1408	3.00	39.84	2.59	1641	65.37
APR	37.01	1291	3.00	36.53	2.52	1596	58.32
MAY	29.77	1029	3.00	29.11	2.65	1679	48.88
JUN	42.94	1491	3.00	42.18	2.86	1812	76.44
JUL	62.61	2174	3.00	61.51	2.66	1686	103.73
AUG	68.15	2352	3.00	66.55	2.21	1400	93.23
SEP	65.61	2282	3.00	64.57	2.13	1349	87.13
OCT	55.64	1934	3.00	54.72	2.34	1483	81.17
NOV	40.49	1406	3.00	39.78	2.45	1552	61.75
DEC	44.20	1524	3.00	43.12	2.60	1648	71.06
YEAR	548.14	19013	2.99	538.79	2.50	1587	855.26
MIN	22.22	770	2.91	21.78	2.13	1349	36.56
MAX	68.15	2352	3.00	66.55	2.89	1831	103.73

Pumphours from MED; EC from routine measurements

EH11 B.HADUS BRIDGE 1985

Discharge rel. : Q =109.75*(W - 0.18)^1.38 TDS/EC = 642

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	0.81	157.49	1.90	1219	192.07
FEB	0.59	75.79	2.50	1604	121.64
MAR	0.70	120.89	1.80	1155	139.64
APR	0.59	83.64	1.90	1219	102.00
MAY	0.59	84.98	1.80	1155	98.15
JUN	0.54	70.29	1.70	1090	76.66
JUL	0.72	129.05	2.20	1411	182.18
AUG	0.84	164.91	2.20	1411	232.81
SEP	0.97	205.30	2.10	1347	276.61
OCT	0.94	200.75	2.20	1411	283.40
NOV	0.76	135.82	2.40	1540	209.24
DEC	0.88	182.71	2.20	1411	257.94
YEAR	0.74	1611.62	2.10	1348	2172.34
MIN	0.54	70.29	1.70	1090	76.66
MAX	0.97	205.30	2.50	1604	283.40

EH12 SAFT P.S. 1985

All units : Q = 8.56 - 0.96 * head TDS/EC = 631

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	47.44	1757	1.92	42.48	3.01	1899	80.66
FEB	21.46	795	1.94	19.16	4.01	2530	48.47
MAR	44.31	1641	2.11	38.60	2.88	1816	70.12
APR	44.87	1662	2.28	38.12	2.45	1549	59.03
MAY	51.89	1922	2.23	44.41	2.63	1658	73.66
JUN	37.29	1381	2.49	30.67	2.60	1640	50.31
JUL	58.40	2163	2.26	49.76	2.54	1601	79.70
AUG	57.10	2115	1.78	52.16	2.44	1538	80.25
SEP	65.88	2440	1.75	60.43	2.49	1573	95.07
OCT	68.07	2521	1.93	60.87	2.52	1589	96.75
NOV	51.46	1906	1.85	46.54	2.49	1570	73.08
DEC	65.96	2443	1.98	58.56	2.67	1687	98.81
YEAR	614.13	22746	2.04	541.76	2.65	1672	905.91
MIN	21.46	795	1.75	19.16	2.44	1538	48.47
MAX	68.07	2521	2.49	60.87	4.01	2530	98.81

Pumphours from MED; EC from routine measurements

EH14 GEMEEZA BRIDGE 1985

Discharge relation : Q = 7.00*(W - 0.72) TDS/EC = 668

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	2.29	29.22	1.50	1001	29.27
FEB	1.69	15.97	1.40	934	14.91
MAR	1.53	15.05	1.10	733	11.04
APR	1.23	9.21	1.20	800	7.36
MAY	1.40	12.79	0.90	601	7.67
JUN	1.45	13.21	0.80	534	7.04
JUL	1.70	18.57	1.00	667	12.40
AUG	1.91	22.42	1.20	800	17.95
SEP	2.21	27.03	1.10	733	19.83
OCT	2.21	27.90	1.10	733	20.46
NOV	2.01	22.82	1.30	867	19.80
DEC	2.27	29.22	1.20	800	23.39
YEAR	1.82	243.41	1.18	785	191.12
MIN	1.23	9.21	0.80	534	7.04
MAX	2.29	29.22	1.50	1001	29.27

EH15 IDDOWWAR BRIDGE 1985

Discharge relation : Q = 21.75*(W +0.11) TDS/EC = 635

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	0.93	59.84	1.40	889	53.19
FEB	0.64	39.00	2.10	1333	51.98
MAR	0.78	50.55	1.30	825	41.72
APR	0.54	36.64	1.50	952	34.88
MAY	0.63	43.11	1.40	889	38.32
JUN	0.71	46.23	1.30	825	38.14
JUL	1.05	67.58	1.30	825	55.75
AUG	1.14	72.62	1.50	952	69.13
SEP	1.27	77.55	1.40	889	68.94
OCT	1.17	73.95	1.30	825	61.00
NOV	0.81	51.90	1.50	952	49.40
DEC	1.03	66.47	1.40	889	59.09
YEAR	0.89	685.44	1.43	907	621.54
MIN	0.54	36.64	1.30	825	34.88
MAX	1.27	77.55	2.10	1333	69.13

EM01 MATARIA P.S. 1985

All units : Q = 9.61 - 0.43 * head TDS/EC = 620

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	19.67	681	2.77	20.63	5.78	3587	74.04
FEB	13.06	452	2.82	13.65	6.11	3788	51.38
MAR	20.88	723	2.78	21.90	6.34	3930	86.08
APR	16.78	582	2.75	17.65	6.16	3820	67.47
MAY	17.61	610	2.78	18.47	6.29	3905	72.16
JUN	19.52	676	2.80	20.45	4.99	3092	63.24
JUL	24.46	842	2.73	25.57	5.00	3099	79.26
AUG	25.60	887	2.75	26.91	5.31	3291	88.57
SEP	26.88	927	2.80	28.05	5.28	3273	91.80
OCT	24.82	856	2.53	26.26	5.88	3644	95.70
NOV	27.20	938	2.85	28.31	4.70	2913	82.48
DEC	23.98	827	2.85	24.96	5.07	3145	78.51
YEAR	260.46	9001	2.77	272.81	5.50	3411	930.69
MIN	13.06	452	2.53	13.65	4.70	2913	51.38
MAX	27.20	938	2.85	28.31	6.34	3930	95.70

Pumphours from MED; from June on EC from routine measurements

ES01 UPPER SERW P.S. 1985

All units : Q = 17.74 - 1.94 * head TDS/EC = 688

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	13.10	455	3.45	18.09	1.24	854	15.45
FEB	9.38	326	3.50	12.85	1.37	945	12.15
MAR	17.19	597	3.75	22.49	0.97	670	15.08
APR	13.36	464	3.50	18.29	1.06	733	13.41
MAY	11.69	406	3.65	15.60	1.53	1051	16.40
JUN	15.84	550	3.72	20.83	0.76	522	10.88
JUL	19.38	673	3.66	25.77	0.78	541	13.94
AUG	21.11	733	3.70	27.87	0.76	523	14.61
SEP	19.58	680	3.80	25.38	0.76	524	13.32
OCT	16.56	575	3.81	21.42	0.75	515	11.02
NOV	12.15	422	3.74	15.92	0.84	577	9.19
DEC	14.66	509	3.68	19.42	0.81	556	10.80
YEAR	184.00	6390	3.66	243.93	0.93	641	156.25
MIN	9.38	326	3.45	12.85	0.75	515	9.19
MAX	21.11	733	3.81	27.87	1.53	1051	16.40

Pumphours from MED; EC partly from routine measurements

ES02 LOWER SERW P.S. 1985

All units : Q = 11.16 - 1.19 * head TDS/EC = 653

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	37.53	1299	2.55	37.94	3.18	2075	78.72
FEB	26.00	900	2.37	27.07	1.50	979	26.50
MAR	42.88	1489	2.41	44.42	2.06	1344	59.70
APR	39.01	1342	2.42	39.98	1.59	1040	41.57
MAY	46.19	1578	2.44	46.76	1.36	887	41.47
JUN	63.23	2158	2.37	64.93	1.48	963	62.52
JUL	74.60	2557	2.43	75.99	1.50	978	74.31
AUG	73.76	2572	2.38	77.02	1.53	997	76.78
SEP	68.02	2360	2.36	70.95	1.43	935	66.33
OCT	49.42	1643	2.41	48.98	1.41	918	44.96
NOV	45.32	1571	2.40	46.96	1.28	834	39.16
DEC	42.16	1464	2.34	44.30	1.60	1046	46.33
YEAR	608.12	20933	2.41	625.30	1.61	1053	658.35
MIN	26.00	900	2.34	27.07	1.28	834	26.50
MAX	74.60	2572	2.55	77.02	3.18	2075	78.72

Pumphours from MED; EC from routine measurements

EF01 FARASQUR P.S. 1985

All units : Q = 5.07 - 0.00 * head TDS/EC = 640

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	15.99	934	3.17	17.04	2.49	1599	27.26
FEB	11.84	684	3.14	12.48	3.16	2022	25.24
MAR	17.18	994	3.21	18.14	3.32	2125	38.56
APR	16.53	958	3.02	17.48	2.91	1866	32.63
MAY	18.38	1113	3.11	20.31	2.47	1585	32.21
JUN	22.85	1575	2.63	28.74	2.06	1321	37.98
JUL	32.06	1778	2.27	32.45	1.85	1185	38.45
AUG	30.95	1747	2.11	31.88	1.78	1143	36.50
SEP	31.71	1771	2.36	32.32	1.79	1146	37.06
OCT	20.25	1452	3.17	26.50	2.00	1279	33.91
NOV	23.92	1318	3.27	24.05	2.32	1489	35.85
DEC	18.16	1035	3.27	18.89	2.39	1533	28.95
YEAR	259.82	15359	2.89	280.28	2.26	1444	404.60
MIN	11.84	684	2.11	12.48	1.78	1143	25.24
MAX	32.06	1778	3.27	32.45	3.32	2125	38.56

7. DISCHARGES AND SALINITIES MIDDLE DELTA DURING 1985

M101 UPPER P.S. NO 1 1985

All units : Q = 6.49 - 0.33 * head TDS/EC = 688

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	2.35	130	2.20	2.69	0.84	580	1.55
FEB	0.90	49	2.15	1.01	0.58	398	0.39
MAR	3.72	214	2.40	4.38	1.02	701	3.06
APR	3.01	169	2.30	3.48	1.13	777	2.70
MAY	2.15	115	2.20	2.38	1.04	715	1.69
JUN	4.93	300	2.40	6.15	1.19	822	5.05
JUL	11.28	624	2.10	13.02	2.16	1485	19.33
AUG	6.87	252	2.40	5.16	1.22	838	4.32
SEP	7.05	387	2.40	7.93	1.36	935	7.41
OCT	4.66	261	2.40	5.35	1.58	1086	5.80
NOV	3.69	204	2.40	4.18	1.07	735	3.06
DEC	6.83	378	2.50	7.70	1.60	1100	8.47
YEAR	57.44	3083	2.32	63.43	1.44	991	62.83
MIN	0.90	49	2.10	1.01	0.58	398	0.39
MAX	11.28	624	2.50	13.02	2.16	1485	19.33

Pump hours mainly from MED; EC from routine measurements

M102 BRIDGE DRAIN NO 1 1985

Discharge relation : Q = 5.37*(W +1.42) TDS/EC = 694

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	0.00	4.15	1.48	1026	4.25
FEB	0.00	4.11	1.70	1179	4.84
MAR	0.00	10.10	1.03	714	7.20
APR	0.00	10.20	1.12	777	7.91
MAY	0.00	11.10	0.93	645	7.15
JUN	0.00	7.00	1.01	700	4.90
JUL	0.00	7.00	0.94	651	4.55
AUG	0.00	7.00	1.08	749	5.24
SEP	0.00	7.00	1.34	929	6.50
OCT	0.00	7.00	1.59	1102	7.71
NOV	-0.89	7.32	1.60	1110	8.12
DEC	-0.82	8.55	1.50	1040	8.89
YEAR	-0.14	90.53	1.23	853	77.26
MIN	-0.89	4.11	0.93	645	4.25
MAX	0.00	11.10	1.70	1179	8.89

Estimation discharges months June till November

M103 P.S. LOWER No 1 1985

un. 1,8 : Q = 1.90 - 0.00 * head TDS/EC = 639
un. 2,6,7 : Q = 4.34 - 0.00 * head
un. 3,4,5 : Q = 8.64 - 0.00 * head
NEW 9,10,11 : Q = 13.01 - 1.33 * head

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	83.36	2880	2.23	62.64	2.24	1434	89.81
FEB	N A	1591	2.15	39.35	6.16	3936	154.87
MAR	83.77	2959	2.40	61.19	3.60	2299	140.69
APR	98.77	3274	2.30	72.93	2.82	1801	131.34
MAY	136.26	2334	2.17	63.63	2.70	1725	109.75
JUN	N A	2951	2.40	73.90	2.18	1392	102.90
JUL	N A	5187	2.11	101.86	2.10	1341	136.63
AUG	126.54	3774	2.40	78.41	2.98	1903	149.22
SEP	N A	2773	2.40	74.32	2.81	1798	133.61
OCT	91.87	2772	2.39	69.47	2.00	1277	88.76
NOV	77.03	2848	2.40	65.99	3.37	2152	142.01
DEC	85.00	3444	2.47	64.02	3.93	2511	160.74
YEAR	N A	36787	2.32	827.71	2.91	1861	1540.33
MIN	77.03	1591	2.11	39.35	2.00	1277	88.76
MAX	136.26	5187	2.47	101.86	6.16	3936	160.74

Pump hours from P.S. files; EC from routine measurements

M104 P.S. NO 2 1985

All units : Q = 9.86 - 0.97 * head TDS/EC = 644

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	29.83	1107	2.48	29.99	3.03	1950	58.50
FEB	18.54	680	2.58	17.93	5.28	3399	60.95
MAR	27.43	1024	2.37	27.79	2.41	1551	43.11
APR	27.48	1008	2.64	26.47	2.85	1835	48.57
MAY	23.38	856	2.57	22.69	2.75	1770	40.16
JUN	30.69	1394	2.33	38.14	2.41	1551	59.17
JUL	47.06	1743	2.04	49.41	2.36	1519	75.05
AUG	39.50	1463	2.35	39.92	2.71	1744	69.65
SEP	34.93	1294	2.10	36.45	2.76	1776	64.74
OCT	27.21	987	2.38	26.87	2.74	1763	47.39
NOV	23.16	863	2.41	23.36	3.35	2156	50.37
DEC	33.34	1261	2.48	33.81	2.84	1827	61.79
YEAR	362.55	13680	2.39	372.83	2.83	1822	679.45
MIN	18.54	680	2.04	17.93	2.36	1519	40.16
MAX	47.06	1743	2.64	49.41	5.28	3399	75.05

EC from routine measurements

MG01 EAST MENUFEYA P.S. 1985

un. 3,4 : Q = 8.01 - 0.23 * head TDS/EC = 707
un. 1,2,5 : Q = 3.67 - 0.54 * head

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	12.63	966	1.99	12.87	1.25	883	11.36
FEB	4.71	866	2.12	16.69	1.86	1314	21.93
MAR	9.22	950	2.38	9.23	0.89	628	5.79
APR	6.87	795	2.63	6.45	1.24	876	5.63
MAY	6.48	713	2.51	6.02	1.10	777	4.67
JUN	3.99	440	2.98	3.18	0.70	494	1.56
JUL	5.99	649	3.35	4.35	1.20	848	3.69
AUG	6.95	771	2.76	6.19	1.34	946	5.85
SEP	11.64	1019	2.46	9.13	1.09	773	7.04
OCT	7.25	816	2.54	6.75	1.23	869	5.86
NOV	10.23	1150	2.06	10.61	1.27	897	9.51
DEC	13.72	1330	1.94	13.88	0.85	607	8.42
YEAR	99.68	10465	2.48	105.35	1.23	867	91.31
MIN	3.99	440	1.94	3.18	0.70	494	1.56
MAX	13.72	1330	3.35	16.69	1.86	1314	21.93

EC from routine measurements

MG02 SEGAAYA P.S. 1985

All units : Q = 5.54 - 0.44 * head TDS/EC = 690

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	12.65	720	-0.20	14.58	2.48	1711	24.96
FEB	6.28	372	0.20	7.30	2.29	1582	11.55
MAR	11.84	646	0.00	12.88	1.40	971	12.52
APR	10.90	563	0.18	11.06	1.40	968	10.71
MAY	6.88	407	0.08	8.06	1.34	927	7.48
JUN	15.11	871	0.34	16.78	1.19	824	13.84
JUL	22.38	1282	0.52	24.50	1.26	871	21.36
AUG	19.00	1075	0.46	20.64	1.43	988	20.43
SEP	23.91	1330	0.46	25.55	1.23	853	21.82
OCT	16.36	907	0.26	17.70	1.55	1069	18.94
NOV	14.33	939	0.34	18.22	1.42	983	17.92
DEC	17.98	1009	0.23	19.80	1.39	962	19.06
YEAR	177.62	10121	0.24	197.07	1.48	1018	200.59
MIN	6.28	372	-0.20	7.30	1.19	824	7.48
MAX	23.91	1330	0.52	25.55	2.48	1711	24.96

MG03 MAHALLET RUH P.S. 1985

All units : Q = 2.46 - 0.00 * head TDS/EC = 701

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	7.09	789	2.30	6.98	1.45	1015	7.08
FEB	3.45	384	1.20	3.40	1.29	817	2.78
MAR	6.00	667	2.20	5.90	0.94	658	3.88
APR	5.33	597	2.20	5.28	0.98	686	3.62
MAY	6.08	676	2.10	5.98	0.79	552	3.30
JUN	5.94	660	2.44	5.84	0.86	609	3.55
JUL	7.47	830	3.00	7.35	0.89	629	4.62
AUG	6.50	723	2.49	6.40	1.14	798	5.10
SEP	8.89	985	2.15	8.72	0.94	658	5.74
OCT	7.86	874	2.03	7.74	0.85	602	4.65
NOV	8.82	981	1.82	8.68	0.98	686	5.94
DEC	8.03	893	1.51	7.90	0.89	629	4.97
YEAR	81.46	9059	2.12	80.17	0.98	689	55.23
MIN	3.45	384	1.20	3.40	0.79	552	2.78
MAX	8.89	985	3.00	8.72	1.45	1015	7.08

EC from routine measurements

MG04 SAMATAY P.S. 1985

All units : Q = 6.59 - 1.25 * head TDS/EC = 672

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	26.99	1467	1.38	25.69	1.86	1249	32.10
FEB	11.94	795	1.17	14.53	2.04	1372	19.95
MAR	27.16	1436	1.09	27.02	1.40	945	25.55
APR	25.36	1071	1.17	19.66	1.43	964	18.96
MAY	19.81	1658	1.15	30.68	1.27	859	26.36
JUN	26.44	1071	1.55	17.67	1.25	843	14.92
JUL	41.01	2165	1.85	33.26	1.15	777	25.86
AUG	33.66	1987	1.60	32.83	1.39	933	30.66
SEP	37.99	2130	1.74	33.82	1.31	884	29.92
OCT	30.24	1616	1.74	25.65	1.29	870	22.33
NOV	28.89	1657	1.59	27.56	1.31	883	24.37
DEC	32.54	1724	1.09	32.54	1.32	888	28.93
YEAR	342.03	18777	1.43	320.91	1.39	935	299.91
MIN	11.94	795	1.09	14.53	1.15	777	14.92
MAX	41.01	2165	1.85	33.82	2.04	1372	32.10

MG05 P.S. NO 5 1985

All units : Q = 6.50 - 0.52 * head TDS/EC = 663

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	12.34	556	0.88	12.14	2.29	1522	18.48
FEB	9.25	400	-0.04	9.39	2.43	1612	15.15
MAR	12.91	585	0.92	12.69	1.93	1279	16.24
APR	14.05	701	0.85	15.31	1.67	1107	16.97
MAY	10.20	493	0.99	10.59	1.71	1137	12.04
JUN	13.45	642	1.05	13.68	1.66	1102	15.07
JUL	25.96	1195	1.12	25.45	1.66	1105	28.14
AUG	18.61	845	1.13	17.95	2.03	1348	24.21
SEP	24.08	1115	1.35	23.26	1.68	1118	26.04
OCT	19.74	921	1.13	19.59	1.61	1072	21.01
NOV	14.14	649	0.90	14.10	1.75	1160	16.35
DEC	19.13	923	0.78	20.26	1.53	1020	20.68
YEAR	193.86	9025	0.92	194.41	1.79	1185	230.38
MIN	9.25	400	-0.04	9.39	1.53	1020	12.04
MAX	25.96	1195	1.35	25.45	2.43	1612	28.14

MG06 GHARBIA BR. NO 6 1985

Discharge relation : Q = 45.39*(W +0.03) TDS/EC = 678

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	0.41	53.44	1.70	1152	61.58
FEB	0.22	27.47	3.20	2169	59.59
MAR	0.30	39.65	1.46	989	39.22
APR	0.35	44.60	1.47	996	44.43
MAY	0.38	49.60	1.26	853	42.33
JUN	0.43	54.59	1.30	881	48.10
JUL	0.74	94.55	1.40	949	89.74
AUG	0.65	83.10	1.50	1016	84.50
SEP	0.78	95.41	1.60	1084	103.49
OCT	0.77	96.47	1.60	1084	104.64
NOV	0.68	83.81	1.70	1152	96.59
DEC	0.86	108.26	1.30	881	95.41
YEAR	0.55	830.95	1.54	1047	869.62
MIN	0.22	27.47	1.26	853	39.22
MAX	0.86	108.26	3.20	2169	104.64

MG07 P.S. NO 6 1985

All units : Q = 7.23 - 0.86 * head TDS/EC = 633

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	10.15	564	2.10	11.01	6.70	4242	46.70
FEB	4.08	227	1.80	4.63	9.85	6238	28.94
MAR	8.22	493	1.74	10.17	4.45	2819	28.67
APR	9.93	465	1.75	9.57	2.71	1715	16.41
MAY	7.50	357	1.69	7.43	4.46	2825	20.98
JUN	10.92	455	1.77	9.23	3.00	1901	17.55
JUL	17.47	978	2.12	18.99	2.62	1664	31.62
AUG	15.84	830	1.94	16.62	2.61	1654	27.50
SEP	15.89	882	2.00	17.48	2.70	1714	29.97
OCT	14.86	829	2.01	16.42	2.94	1861	30.57
NOV	9.88	537	2.02	10.59	3.51	2224	23.57
DEC	12.27	662	2.04	13.01	2.73	1731	22.53
YEAR	137.01	7279	1.92	145.15	3.54	2239	325.01
MIN	4.08	227	1.69	4.63	2.61	1654	16.41
MAX	17.47	978	2.12	18.99	9.85	6238	46.70

MG08 HAMUL P.S. 1985

unit 3 : Q = 11.63 - 1.93 * head TDS/EC = 660
un. 1,2 : Q = 8.24 - 0.00 * head

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	14.39	392	0.40	13.30	2.10	1385	18.19
FEB	0.00	0	0.57	0.00	0.97	639	0.00
MAR	25.37	684	0.69	21.59	1.89	1251	26.92
APR	37.90	1051	0.64	31.17	1.67	1106	34.52
MAY	39.42	1133	0.81	33.60	1.94	1279	43.03
JUN	45.40	1096	0.73	32.67	1.63	1077	35.20
JUL	20.19	1157	0.50	35.98	1.55	1024	36.73
AUG	43.71	1165	0.56	35.97	1.44	951	34.25
SEP	30.22	783	0.34	24.00	1.37	906	21.74
OCT	13.97	428	0.70	13.18	1.50	989	13.09
NOV	16.26	400	0.55	12.08	1.51	1000	12.06
DEC	4.82	130	0.31	3.85	1.23	811	3.13
YEAR	291.65	8419	0.57	257.39	1.64	1083	278.86
MIN	0.00	0	0.31	0.00	0.97	639	0.00
MAX	45.40	1165	0.81	35.98	2.10	1385	43.03

Pump hours first trimester from MED

MG09 P.S. NO 4 1985

All units : Q = 11.22 - 1.51 * head TDS/EC = 649

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	25.08	929	2.73	23.79	1.99	1295	30.86
FEB	15.01	593	2.77	14.85	2.38	1549	23.03
MAR	20.33	503	2.82	12.62	1.68	1092	13.79
APR	21.60	725	2.76	18.38	1.75	1140	20.96
MAY	15.91	573	2.70	14.71	1.74	1128	16.62
JUN	11.82	1217	2.75	30.84	1.52	990	30.53
JUL	46.54	1342	2.91	32.83	1.24	804	26.46
AUG	40.88	1328	2.94	32.38	1.43	931	30.17
SEP	35.15	1292	2.90	31.77	1.50	972	30.93
OCT	36.01	1254	2.92	30.71	1.50	972	29.89
NOV	24.75	829	2.75	21.05	1.58	1030	21.70
DEC	27.04	899	2.84	22.44	1.52	988	22.17
YEAR	320.12	11484	2.82	286.37	1.60	1038	297.11
MIN	11.82	503	2.70	12.62	1.24	804	13.79
MAX	46.54	1342	2.94	32.83	2.38	1549	30.93

MG10 P.S. NO 3 1985

All units : Q = 7.42 - 0.75 * head TDS/EC = 634

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	16.28	903	3.06	16.65	4.23	2684	44.70
FEB	10.80	569	2.99	10.59	5.01	3181	33.71
MAR	17.51	972	2.64	19.03	3.35	2127	40.50
APR	16.62	923	2.72	17.86	2.99	1899	33.96
MAY	15.62	867	2.87	16.44	3.14	1990	32.73
JUN	25.66	1424	2.70	27.65	2.40	1527	42.23
JUL	33.30	1848	2.14	38.68	2.00	1270	49.14
AUG	29.29	1596	3.03	29.54	2.37	1506	44.54
SEP	28.46	1575	3.11	28.81	2.34	1483	42.77
OCT	22.29	1228	3.17	22.28	2.27	1441	32.13
NOV	15.67	846	2.78	16.24	3.09	1958	31.82
DEC	20.43	778	2.63	14.99	2.45	1557	23.34
YEAR	251.93	13529	2.82	258.76	2.75	1745	451.57
MIN	10.80	569	2.14	10.59	2.00	1270	23.34
MAX	33.30	1848	3.17	38.68	5.01	3181	49.14

Pump hours in 6 months from MED

MG11 GHARBIA BR. NO 7 1985

Discharge rel. : Q = 38.31*(W - -0.39)^2.61 TDS/EC = 650

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	0.28	38.70	2.13	1383	53.54
FEB	0.21	26.90	4.72	3067	82.50
MAR	0.33	44.19	1.97	1279	56.55
APR	0.33	44.00	1.86	1207	53.16
MAY	0.33	43.55	1.90	1234	53.76
JUN	0.46	69.50	1.70	1104	76.74
JUL	0.65	115.32	1.60	1039	119.89
AUG	0.56	91.94	1.40	908	83.60
SEP	0.63	106.31	1.70	1104	117.39
OCT	0.65	108.01	1.70	1104	119.27
NOV	0.38	63.79	1.80	1169	74.62
DEC	0.51	81.41	1.70	1104	89.89
YEAR	0.44	833.62	1.81	1177	980.91
MIN	0.21	26.90	1.40	908	53.16
MAX	0.65	115.32	4.72	3067	119.89

Estimation water level April

MG12 HAFIR SH. EL DIN P.S 1985

. : Q = 10.12 - 1.18 * head TDS/EC = 625

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	27.16	1507	3.32	33.64	9.90	6187	208.23
FEB	13.07	656	3.87	13.17	14.17	8861	116.72
MAR	20.93	1125	3.93	22.32	9.37	5856	130.72
APR	20.19	1120	4.01	21.69	8.78	5492	119.17
MAY	22.94	1220	4.04	23.47	8.53	5335	125.24
JUN	26.57	1475	3.98	28.71	7.88	4925	141.45
JUL	37.91	2108	4.06	40.39	7.43	4645	187.69
AUG	34.02	1894	4.04	36.50	8.20	5130	187.31
SEP	36.07	2006	3.91	39.72	7.91	4946	196.49
OCT	29.72	1652	4.05	31.76	9.74	6090	193.46
NOV	26.53	1480	3.93	29.15	10.13	6332	184.65
DEC	32.34	1795	4.04	34.56	10.14	6338	219.09
YEAR	327.45	18038	3.93	355.08	9.06	5661	2010.22
MIN	13.07	656	3.32	13.17	7.43	4645	116.72
MAX	37.91	2108	4.06	40.39	14.17	8861	219.09

MG13 GHARBIA OUTFALL 1985

Discharge relation : Q = 77.07*(W +0.08) TDS/EC = 636

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	0.25	69.00	5.73	3644	251.43
FEB	0.27	64.60	5.06	3218	207.88
MAR	0.24	66.40	2.37	1507	100.06
APR	0.24	63.60	1.88	1195	76.00
MAY	0.22	62.90	4.78	3040	191.21
JUN	0.35	86.05	4.39	2792	240.25
JUL	0.48	116.26	1.64	1043	121.25
AUG	0.43	106.44	3.42	2175	231.50
SEP	0.48	111.34	1.87	1189	132.38
OCT	0.48	114.27	9.67	6150	702.76
NOV	0.38	91.29	1.99	1265	115.48
DEC	0.43	105.50	1.79	1138	120.05
YEAR	0.35	1057.65	3.70	2355	2490.25
MIN	0.22	62.90	1.64	1043	76.00
MAX	0.48	116.26	9.67	6150	702.76

Discharges and salinities not very reliable
All EC from routine measurements

MT01 TIRA P.S. 1985

All units : Q = 8.20 - 0.00 * head TDS/EC = 624

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	24.72	861	3.66	25.41	5.40	3369	85.60
FEB	17.34	600	3.76	17.71	16.05	9999	177.35
MAR	21.89	771	3.73	22.75	9.14	5708	129.86
APR	21.47	755	3.72	22.28	8.72	5440	121.21
MAY	13.12	772	3.52	22.78	8.51	5309	120.95
JUN	33.33	1159	3.40	34.21	6.19	3862	132.11
JUL	48.46	1687	3.43	49.80	5.83	3637	181.12
AUG	49.44	1715	3.52	50.62	5.48	3419	173.08
SEP	50.86	1764	3.53	52.07	5.72	3571	185.98
OCT	34.23	1170	3.71	34.53	6.00	3743	129.27
NOV	26.66	933	3.48	27.54	7.22	4508	124.17
DEC	27.02	935	3.72	27.60	6.71	4190	115.68
YEAR	368.54	13122	3.60	387.30	6.94	4328	1676.38
MIN	13.12	600	3.40	17.71	5.40	3369	85.60
MAX	50.86	1764	3.76	52.07	16.05	9999	185.98

Pump hours in first quarter from MED
EC from routine measurements

M701 P.S. NO 7 1985

All units : Q = 8.96 - 1.12 * head TDS/EC = 634

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	19.74	1098	3.00	22.14	5.02	3182	70.44
FEB	13.17	670	3.00	13.50	10.88	6897	93.10
MAR	21.58	1164	3.00	23.46	3.60	2282	53.53
APR	25.36	1386	3.00	27.94	3.21	2034	56.83
MAY	21.70	1206	3.00	24.31	3.38	2142	52.08
JUN	21.43	1191	3.00	24.01	3.14	1989	47.77
JUL	30.85	1729	3.00	34.85	1.62	1026	35.76
AUG	25.14	1394	3.00	28.10	3.28	2078	58.41
SEP	30.20	1677	3.00	33.80	3.85	2443	82.60
OCT	24.44	1359	3.00	27.39	4.68	2966	81.25
NOV	24.13	1341	3.00	27.03	4.42	2801	75.73
DEC	28.31	1528	3.00	30.80	3.82	2421	74.58
YEAR	286.05	15743	3.00	317.33	3.89	2465	782.08
MIN	13.17	670	3.00	13.50	1.62	1026	35.76
MAX	30.85	1729	3.00	34.85	10.88	6897	93.10

Pump hours partly from MED; EC from routine measurements

M801 P.S. LOWER NO 8 1985

All units : Q = 9.20 - 1.65 * head TDS/EC = 630

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	23.03	853	2.28	16.73	3.87	2440	40.83
FEB	15.44	558	2.33	10.73	5.96	3758	40.36
MAR	19.65	698	2.38	13.25	5.06	3192	42.31
APR	28.28	999	2.34	19.18	3.49	2203	42.29
MAY	25.51	931	2.40	17.55	3.38	2133	37.44
JUN	26.56	955	2.21	19.04	5.58	3519	67.01
JUL	47.43	1646	2.00	34.95	3.65	2299	80.40
AUG	36.04	1293	2.17	26.14	4.42	2784	72.81
SEP	41.49	1522	2.19	30.58	4.98	3141	96.12
OCT	30.37	1180	2.25	23.29	6.20	3908	91.02
NOV	27.29	974	2.17	19.66	6.94	4374	86.04
DEC	27.97	913	2.23	18.12	5.40	3407	61.75
YEAR	349.06	12522	2.25	249.22	4.83	3043	758.38
MIN	15.44	558	2.00	10.73	3.38	2133	37.44
MAX	47.43	1646	2.40	34.95	6.94	4374	96.12

MN01 UPPER P.S. NO 8 1985

All units : Q = 8.69 - 0.59 * head TDS/EC = 668

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	22.09	729	1.15	20.95	1.78	1191	24.97
FEB	10.41	347	0.98	10.12	2.35	1571	15.91
MAR	18.41	629	1.01	18.32	1.75	1173	21.50
APR	20.31	702	0.93	20.56	1.62	1085	22.31
MAY	17.48	677	0.93	19.83	1.37	918	18.23
JUN	17.08	570	0.99	16.63	1.49	994	16.55
JUL	28.36	991	1.00	28.85	1.49	994	28.72
AUG	27.64	938	1.04	27.25	1.60	1072	29.23
SEP	32.68	1120	1.20	32.19	1.48	992	31.98
OCT	25.83	883	1.16	25.44	1.48	993	25.28
NOV	24.27	833	1.05	24.19	1.59	1066	25.79
DEC	27.04	902	1.09	26.11	1.59	1063	27.77
YEAR	271.60	9321	1.04	270.44	1.60	1066	288.24
MIN	10.41	347	0.93	10.12	1.37	918	15.91
MAX	32.68	1120	1.20	32.19	2.35	1571	31.98

MN02 MANDURA P.S. 1985

All units : Q = 10.69 - 1.24 * head TDS/EC = 644

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	14.71	539	2.50	14.72	2.30	1482	21.83
FEB	6.21	187	2.61	4.97	5.56	3585	17.84
MAR	16.55	588	2.68	15.58	2.21	1426	22.24
APR	15.14	546	2.66	14.52	3.18	2050	29.77
MAY	15.14	526	2.67	13.96	1.62	1043	14.57
JUN	16.95	597	2.65	15.90	2.15	1388	22.08
JUL	22.65	800	2.67	21.23	2.33	1501	31.90
AUG	19.81	701	2.69	18.56	2.31	1487	27.61
SEP	20.38	757	2.70	19.98	2.23	1439	28.78
OCT	15.71	527	2.73	13.84	2.23	1440	19.95
NOV	16.38	606	2.70	16.01	2.60	1677	26.85
DEC	15.95	555	2.71	14.63	2.46	1588	23.25
YEAR	195.58	6929	2.66	183.90	2.42	1559	286.67
MIN	6.21	187	2.50	4.97	1.62	1043	14.57
MAX	22.65	800	2.73	21.23	5.56	3585	31.90

MN03 NASHART OUTFALL 1985

Discharge rel. : Q = TDS/EC = 662

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	0.17		2.05	1359	.
FEB	0.12	14.27	3.09	2045	29.18
MAR	0.31	30.13	1.84	1220	36.76
APR	N A	N A	1.80	1193	N A
MAY	N A	N A	1.70	1127	N A
JUN	0.46	25.00	1.71	1134	28.34
JUL	0.33	42.56	1.65	1094	46.56
AUG	N A	N A	1.88	1246	N A
SEP	0.38		1.87	1240	
OCT	0.32		1.84	1220	
NOV	0.25		2.00	1326	
DEC	0.26	33.05	1.47	975	32.21
YEAR	N A	N A	1.91	1265	N A
MIN	0.12	0.00	1.47	975	0.00
MAX	0.46	42.56	3.09	2045	46.56

All data from routine measurements

MN04 ZEINI P.S. 1985

unit 2 : Q = 5.34 - 0.89 * head TDS/EC = 635
un. 1,3 : Q = 8.31 - 1.20 * head

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	9.20	552	3.20	8.23	3.48	2215	18.25
FEB	4.32	247	3.20	3.92	10.92	6936	27.26
MAR	10.75	598	3.07	9.95	2.93	1860	18.51
APR	8.46	471	3.20	7.57	3.14	1993	15.08
MAY	10.96	607	3.20	9.31	3.15	1999	18.60
JUN	13.82	768	3.20	11.09	2.64	1679	18.61
JUL	20.36	1130	3.20	15.04	3.36	2132	32.07
AUG	16.97	944	3.20	13.29	2.57	1633	21.71
SEP	17.80	989	3.20	13.56	2.74	1739	23.56
OCT	13.00	714	3.20	8.84	4.11	2614	23.14
NOV	11.09	651	3.20	8.92	5.08	3229	29.05
DEC	9.36	535	3.20	7.80	3.46	2198	17.41
YEAR	146.09	8206	3.19	117.52	3.53	2240	263.25
MIN	4.32	247	3.07	3.92	2.57	1633	15.08
MAX	20.36	1130	3.20	15.04	10.92	6936	32.07

Pump hours mainly from MED; EC mainly from routine measurements

M111 P.S. NO 11 1985

All units : Q = 7.05 - 0.00 * head TDS/EC = 659

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	26.35	975	2.77	24.74	2.11	1389	34.36
FEB	19.54	724	2.77	18.37	3.95	2602	47.80
MAR	40.59	1462	2.73	37.10	1.62	1066	39.57
APR	37.01	1371	2.77	34.79	1.66	1093	38.02
MAY	46.95	1771	2.73	44.94	1.61	1060	47.65
JUN	64.48	1956	2.72	49.64	1.57	1034	51.33
JUL	60.91	2278	2.65	57.81	1.31	862	49.88
AUG	25.41	2515	2.80	63.83	1.48	974	62.18
SEP	62.77	2231	2.80	56.62	1.31	866	49.03
OCT	47.57	1763	2.68	44.74	1.45	955	42.73
NOV	37.88	1404	2.72	35.63	1.30	856	30.51
DEC	36.10	1261	2.80	32.00	1.81	1191	38.13
YEAR	505.56	19711	2.75	500.21	1.61	1062	531.19
MIN	19.54	724	2.65	18.37	1.30	856	30.51
MAX	64.48	2515	2.80	63.83	3.95	2602	62.18

EC from routine measurements

MB01 BURULLUS P.S. 1985

All units : Q = 3.00 - 0.00 * head TDS/EC = NA

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	4.61	426	2.51	4.61	N A	N A	N A
FEB	4.21	389	2.54	4.21	N A	N A	N A
MAR	4.29	397	2.50	4.29	N A	N A	N A
APR	4.19	387	2.50	4.19	N A	N A	N A
MAY	4.73	437	2.50	4.73	N A	N A	N A
JUN	4.19	387	2.50	4.19	N A	N A	N A
JUL	5.42	501	2.50	5.42	N A	N A	N A
AUG	5.75	532	2.50	5.75	N A	N A	N A
SEP	5.74	531	2.50	5.74	N A	N A	N A
OCT	6.17	571	2.50	6.17	N A	N A	N A
NOV	5.73	530	2.50	5.73	N A	N A	N A
DEC	6.57	638	2.50	6.57	N A	N A	N A
YEAR	61.60	5726	2.50	61.60	N A	N A	N A
MIN	4.19	387	2.50	4.19	0.00	0	0.00
MAX	6.57	638	2.54	6.57	0.00	0	0.00

All data from MED

MZ01 ZAGLOUL P.S. 1985

All units : Q = 5.00 - 0.00 * head TDS/EC = NA

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	14.30	795	2.59	14.30	N A	N A	N A
FEB	13.56	753	2.58	13.56	N A	N A	N A
MAR	18.37	1020	2.64	18.37	N A	N A	N A
APR	17.16	953	2.63	17.16	N A	N A	N A
MAY	29.24	1625	2.69	29.24	N A	N A	N A
JUN	28.77	1599	2.63	28.77	N A	N A	N A
JUL	31.18	1732	2.64	31.18	N A	N A	N A
AUG	27.11	1506	2.71	27.11	N A	N A	N A
SEP	32.53	1807	2.52	32.53	N A	N A	N A
OCT	23.30	1294	2.71	23.30	N A	N A	N A
NOV	18.06	1004	2.69	18.06	N A	N A	N A
DEC	15.52	862	2.75	15.52	N A	N A	N A
YEAR	269.10	14950	2.65	269.10	N A	N A	N A
MIN	13.56	753	2.52	13.56	0.00	0	0.00
MAX	32.53	1807	2.75	32.53	0.00	0	0.00

All data from MED

MR01 TILLA OUTFALL 1985

Discharge relation : Q = 13.39*(W - 2.47) TDS/EC = 710

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	2.85	18.46	0.99	703	12.98
FEB	3.25	29.80	0.84	596	17.76
MAR	2.75	11.48	1.04	738	8.47
APR	2.76	10.06	1.10	781	7.86
MAY	2.53	2.15	0.99	703	1.51
JUN	2.53	2.08	1.19	845	1.76
JUL	2.63	5.84	1.23	834	4.84
AUG	2.61	5.28	1.16	785	4.14
SEP	2.69	7.89	0.99	675	5.62
OCT	2.84	13.74	1.03	702	11.71
NOV	3.05	20.38	1.00	681	13.89
DEC	3.15	24.81	0.92	623	14.99
YEAR	2.80	151.97	0.98	694	105.53
MIN	2.53	2.08	0.84	596	1.51
MAX	3.25	29.80	1.23	845	17.76

Data for Jan. till July from routine measurements

MS01 SABAL OUTFALL 1985

Discharge rel. : Q = 22.46*(W - 6.23)^1.80 TDS/EC = 729

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	N A	N A	N A	N A	N A
FEB	N A	N A	N A	N A	N A
MAR	N A	N A	N A	N A	N A
APR	N A	N A	N A	N A	N A
MAY	N A	N A	N A	N A	N A
JUN	N A	N A	N A	N A	N A
JUL	N A	N A	N A	N A	N A
AUG	6.53	7.34	1.06	775	5.72
SEP	6.56	8.05	1.05	768	6.17
OCT	6.56	8.92	1.35	990	8.83
NOV	6.64	12.23	1.05	768	9.40
DEC	6.67	13.97	0.85	619	8.65
YEAR	N A	120	N A	N A	93
MIN	0.00	0.00	0.00	0	0.00
MAX	6.67	13.97	1.35	990	9.40

Estimation year discharge : (50.51/5)*12 = 120*10^6 m3
Estimation year saltload : (38.77/5)*12 = 93*10^6 kg

8. DISCHARGES AND SALINITIES WESTERN DELTA DURING 1985

WE01 ETAY BARUD P.S. 1985

All units : Q = 2.44 - 0.00 * head TDS/EC = 687

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	5.30	556	3.22	4.88	1.10	755	3.68
FEB	2.96	331	3.16	2.90	1.16	798	2.32
MAR	1.99	641	3.85	5.63	1.08	745	4.19
APR	4.55	473	3.83	4.15	1.30	896	3.72
MAY	7.17	747	3.68	6.56	0.88	608	3.98
JUN	8.29	882	4.03	7.74	0.78	540	4.19
JUL	9.55	1026	4.18	9.01	1.05	727	6.55
AUG	10.00	1094	4.10	9.60	1.17	807	7.76
SEP	10.99	1135	3.67	9.96	1.09	748	7.46
OCT	10.34	1116	3.98	9.80	1.04	715	7.00
NOV	8.10	812	4.66	7.13	0.86	592	4.22
DEC	7.10	753	3.88	6.61	1.10	761	5.03
YEAR	86.34	9566	3.85	83.97	1.04	716	60.10
MIN	1.99	331	3.16	2.90	0.78	540	2.32
MAX	10.99	1135	4.66	9.96	1.30	896	7.76

WE02 SHUBRAKHIT P.S. 1985

All units : Q = 6.55 - 0.86 * head TDS/EC = 682

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	21.31	898	0.98	18.19	1.33	912	16.61
FEB	14.97	607	1.02	12.76	1.44	987	12.61
MAR	26.04	1073	0.95	22.17	1.04	714	15.83
APR	20.39	830	1.11	16.71	1.09	745	12.45
MAY	22.95	947	0.95	19.40	0.85	585	11.35
JUN	22.88	839	1.06	16.99	0.78	533	9.07
JUL	29.00	1345	1.11	27.01	1.08	739	19.98
AUG	27.90	1184	1.07	23.96	1.17	802	19.22
SEP	32.39	1393	1.24	27.47	1.16	790	21.73
OCT	29.73	1359	1.27	26.59	1.00	683	18.20
NOV	23.47	977	1.02	19.93	1.08	741	14.78
DEC	23.36	1016	1.09	20.47	1.13	774	15.87
YEAR	294.39	12468	1.07	251.65	1.09	746	187.70
MIN	14.97	607	0.95	12.76	0.78	533	9.07
MAX	32.39	1393	1.27	27.47	1.44	987	21.73

WE03 ZARQUN P.S. 1985

All units : Q = 9.21 - 2.30 * head TDS/EC = 656

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	13.16	714	1.70	13.19	1.28	841	11.10
FEB	8.88	482	1.69	9.13	1.68	1105	10.09
MAR	12.67	656	1.68	12.57	1.26	827	10.40
APR	16.02	881	1.67	17.00	1.39	917	15.60
MAY	17.87	988	1.70	18.77	0.94	617	11.61
JUN	20.60	968	1.68	18.61	1.33	875	16.30
JUL	26.36	1026	1.92	17.75	1.31	859	15.25
AUG	24.14	1184	1.83	21.18	1.35	885	18.75
SEP	26.35	1457	1.96	24.68	1.26	829	20.49
OCT	19.22	1061	1.90	18.36	1.31	862	15.84
NOV	17.24	962	1.60	19.19	1.44	945	18.16
DEC	15.41	842	1.85	14.93	1.45	951	14.22
YEAR	217.92	11221	1.77	205.36	1.32	866	177.81
MIN	8.88	482	1.60	9.13	0.94	617	10.09
MAX	26.36	1457	1.96	24.68	1.68	1105	20.49

WE04 EDKO IRR. P.S. 1985

All units : Q = 6.38 - 0.00 * head TDS/EC = 685

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	18.50	808	2.23	18.55	1.22	834	15.49
FEB	9.36	322	2.13	7.39	1.29	887	6.56
MAR	27.43	1108	2.34	25.44	1.26	861	21.94
APR	25.97	1142	2.62	26.22	1.13	777	20.40
MAY	23.94	951	2.59	21.84	0.92	633	13.87
JUN	28.28	1475	2.74	33.87	1.00	688	23.36
JUL	29.95	1357	2.73	31.16	1.11	760	23.71
AUG	31.23	1329	2.67	30.52	1.16	798	24.42
SEP	31.44	1366	2.46	31.37	1.10	756	23.77
OCT	33.63	1423	2.24	32.68	1.03	710	23.24
NOV	26.78	1127	2.30	25.88	1.11	760	19.71
DEC	17.09	747	2.19	17.15	1.20	821	13.77
YEAR	303.60	13155	2.44	302.07	1.11	762	230.24
MIN	9.36	322	2.13	7.39	0.92	633	6.56
MAX	33.63	1475	2.74	33.87	1.29	887	24.42

WE05 DILINGAT P.S. 1985

All units : Q = 8.17 - 1.05 * head TDS/EC = 713

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	16.82	803	2.82	14.92	1.05	754	11.26
FEB	9.76	454	1.97	9.93	1.10	783	7.78
MAR	15.94	743	2.50	14.80	1.10	783	11.60
APR	15.72	761	2.98	13.79	1.10	783	10.81
MAY	16.50	785	2.76	14.85	1.10	783	11.64
JUN	16.63	781	3.18	13.57	1.10	783	10.64
JUL	19.99	1014	3.05	18.18	0.93	663	12.07
AUG	23.43	1130	2.72	21.57	1.00	714	15.43
SEP	23.90	1174	2.89	21.66	0.98	698	15.13
OCT	23.68	1052	2.71	20.08	0.93	667	13.42
NOV	20.32	982	2.51	19.55	0.96	690	13.51
DEC	19.21	882	2.37	18.00	0.98	704	12.68
YEAR	221.90	10561	2.71	200.90	1.02	727	145.97
MIN	9.76	454	1.97	9.93	0.93	663	7.78
MAX	23.90	1174	3.18	21.66	1.10	783	15.43

WE06 KHANDAK EL GH. P.S. 1985

All units : Q = 2.35 - 0.00 * head TDS/EC = 697

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	5.72	605	2.62	5.11	1.21	849	4.34
FEB	2.02	182	2.52	1.53	1.10	766	1.17
MAR	5.66	567	3.63	4.79	1.17	814	3.91
APR	5.59	568	3.37	4.80	1.14	795	3.82
MAY	5.02	505	3.39	4.27	0.90	628	2.68
JUN	6.48	673	3.60	5.69	0.83	579	3.29
JUL	7.61	812	3.90	6.86	1.05	737	5.06
AUG	7.94	830	3.76	7.02	1.16	811	5.69
SEP	8.48	886	3.39	7.49	1.04	725	5.43
OCT	9.79	1003	3.55	8.48	0.96	672	5.69
NOV	5.61	594	3.32	5.02	1.19	833	4.18
DEC	6.03	638	3.48	5.39	1.07	750	4.05
YEAR	75.95	7863	3.38	66.45	1.06	742	49.31
MIN	2.02	182	2.52	1.53	0.83	579	1.17
MAX	9.79	1003	3.90	8.48	1.21	849	5.69

WE07 KHAIRY P.S. 1985

All units : Q = 7.14 - 1.39 * head TDS/EC = 690

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	16.52	805	1.83	12.86	1.34	925	11.90
FEB	10.15	458	1.68	7.82	1.40	971	7.60
MAR	17.07	817	1.81	13.57	1.00	692	9.40
APR	15.27	734	1.79	12.28	1.13	783	9.62
MAY	15.09	704	1.73	11.96	1.00	689	8.25
JUN	18.02	865	1.84	14.26	0.91	634	9.04
JUL	19.92	985	1.94	15.70	1.10	758	11.91
AUG	19.92	968	1.85	15.91	1.09	755	12.02
SEP	22.05	1071	1.91	17.26	1.09	756	13.05
OCT	20.51	899	1.99	14.11	1.08	751	10.61
NOV	16.38	796	1.74	13.50	1.15	798	10.78
DEC	16.37	780	1.68	13.50	1.13	780	10.53
YEAR	207.27	9882	1.82	162.73	1.11	766	124.71
MIN	10.15	458	1.68	7.82	0.91	634	7.60
MAX	22.05	1071	1.99	17.26	1.40	971	13.05

WE08 HALQ EL GAMAL P.S. 1985

All units : Q = 4.83 - 0.70 * head TDS/EC = 652

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	22.52	1251	2.55	13.90	3.34	2176	30.27
FEB	19.01	1056	2.73	11.16	3.13	2043	22.81
MAR	28.03	1545	2.73	16.21	2.24	1463	23.73
APR	31.52	1730	2.86	17.62	2.37	1545	27.25
MAY	34.90	1926	2.70	20.38	2.05	1341	27.35
JUN	41.40	2219	2.37	25.35	1.85	1210	30.70
JUL	44.93	2485	2.33	28.61	1.89	1235	35.36
AUG	45.00	2488	2.37	28.40	1.72	1123	31.90
SEP	42.26	2339	2.17	27.88	1.73	1129	31.52
OCT	41.89	2304	2.58	24.99	1.70	1107	27.70
NOV	35.89	1953	2.69	20.72	1.80	1178	24.43
DEC	35.64	1935	2.73	20.33	2.82	1843	37.49
YEAR	422.99	23231	2.57	255.55	2.10	1372	350.51
MIN	19.01	1056	2.17	11.16	1.70	1107	22.81
MAX	45.00	2488	2.86	28.61	3.34	2176	37.49

WE09 HALQ EL GAMAL BRIDGE 1985

Discharge relation : Q = 77.25*(W - 0.48) TDS/EC = 671

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	0.59	22.15	1.31	879	19.46
FEB	0.80	42.12	2.16	1449	61.03
MAR	0.75	56.43	1.82	1221	68.90
APR	0.66	31.90	1.68	1127	35.95
MAY	0.67	41.58	1.44	966	40.16
JUN	0.73	50.79	1.41	946	48.04
JUL	0.81	69.14	1.51	1013	70.03
AUG	0.82	71.74	1.58	1060	76.04
SEP	0.93	90.91	1.87	1254	114.07
OCT	0.93	93.77	1.98	1328	124.52
NOV	0.76	57.53	1.55	1040	59.83
DEC	0.76	58.46	2.00	1342	78.45
YEAR	0.77	686.52	1.73	1160	796.48
MIN	0.59	22.15	1.31	879	19.46
MAX	0.93	93.77	2.16	1449	124.52

Discharges from a less accurate rating curve
All data from January till April from routine measurements

WE10 EDKO P.S. 1985

All units : Q = 3.92 - 0.22 * head TDS/EC = 638

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	9.28	730	3.13	8.48	4.77	3044	25.84
FEB	6.28	487	2.82	5.79	5.38	3436	19.90
MAR	10.72	820	3.05	9.59	4.49	2869	27.52
APR	11.69	890	3.01	10.43	3.84	2453	25.59
MAY	13.34	1037	2.94	12.21	3.50	2236	27.32
JUN	10.83	1077	2.28	13.27	2.87	1836	24.37
JUL	19.22	1753	3.11	20.41	3.05	1945	39.72
AUG	21.02	1723	2.75	20.55	2.69	1720	35.35
SEP	17.31	1679	2.57	20.26	2.61	1664	33.73
OCT	17.73	1407	3.40	16.09	3.20	2044	32.91
NOV	10.79	1108	3.24	12.78	3.26	2084	26.65
DEC	12.50	850	3.08	9.92	4.10	2617	25.97
YEAR	160.71	13561	2.95	159.78	3.38	2158	344.87
MIN	6.28	487	2.28	5.79	2.61	1664	19.90
MAX	21.02	1753	3.40	20.55	5.38	3436	39.72

WE11 BOSSEILLY P.S. 1985

All units : Q = 5.17 - 0.57 * head TDS/EC = 650

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	15.04	1143	3.20	13.76	3.11	2021	27.81
FEB	13.48	1020	3.08	12.53	4.34	2823	35.37
MAR	26.58	2064	3.34	24.26	1.21	785	19.06
APR	24.80	1920	3.38	22.41	2.25	1462	32.76
MAY	31.57	2478	2.99	30.91	1.82	1182	36.54
JUN	38.25	2994	2.75	38.82	2.80	1819	70.64
JUL	42.12	3297	2.78	42.55	1.79	1165	49.60
AUG	44.85	3504	2.81	45.01	1.58	1026	46.18
SEP	43.06	3399	3.78	36.89	1.33	864	31.87
OCT	43.78	3450	3.14	41.98	1.71	1110	46.63
NOV	32.15	2544	3.40	29.59	2.21	1435	42.48
DEC	27.45	2181	3.47	25.06	2.59	1686	42.25
YEAR	383.13	29994	3.18	363.77	2.04	1323	481.19
MIN	13.48	1020	2.75	12.53	1.21	785	19.06
MAX	44.85	3504	3.78	45.01	4.34	2823	70.64

Pumphours from MED; EC from routine measurements

WB01 BARSIQ P.S. 1985

All units : Q = 4.34 - 0.64 * head TDS/EC = 651

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	21.93	1218	2.47	12.09	3.51	2284	27.61
FEB	19.74	1095	2.56	10.64	6.66	4335	46.12
MAR	25.61	1422	2.67	13.46	3.96	2577	34.68
APR	26.56	1476	2.63	14.11	3.28	2137	30.15
MAY	33.31	1851	2.53	18.13	4.70	3059	55.45
JUN	37.04	2055	2.67	19.46	2.93	1906	37.10
JUL	44.08	2448	2.52	24.03	3.49	2275	54.67
AUG	49.02	2724	2.49	26.93	3.82	2486	66.94
SEP	50.59	2811	2.34	28.76	2.67	1737	49.96
OCT	39.02	2169	2.70	20.39	3.00	1952	39.81
NOV	24.85	1380	2.68	13.04	3.73	2427	31.65
DEC	30.36	1686	2.72	15.77	3.64	2372	37.40
YEAR	402.11	22335	2.58	216.81	3.62	2359	511.54
MIN	19.74	1095	2.34	10.64	2.67	1737	27.61
MAX	50.59	2811	2.72	28.76	6.66	4335	66.94

Pumphours from MED; EC from routine measurements

WT01 TABIA P.S. 1985

All units : Q = 7.85 - 0.00 * head TDS/EC = 660

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	41.01	1442	4.80	40.75	2.15	1418	57.82
FEB	36.27	1233	4.77	34.84	3.05	2017	70.33
MAR	52.38	1790	4.73	50.58	2.32	1533	77.56
APR	56.65	1968	4.76	55.61	2.26	1494	83.12
MAY	58.75	2048	4.59	57.87	2.21	1463	84.68
JUN	57.14	1996	4.80	56.40	2.26	1497	84.47
JUL	64.76	2177	4.78	61.52	2.34	1547	95.25
AUG	71.81	2260	4.66	63.86	2.20	1457	93.13
SEP	70.80	2478	4.77	70.02	2.20	1455	101.95
OCT	69.46	2405	4.76	67.96	2.01	1326	90.20
NOV	61.10	2148	4.80	60.70	2.06	1361	82.69
DEC	63.97	2242	4.54	63.35	2.03	1341	85.05
YEAR	704.10	24187	4.73	683.46	2.23	1472	1006.25
MIN	36.27	1233	4.54	34.84	2.01	1326	57.82
MAX	71.81	2478	4.80	70.02	3.05	2017	101.95

WU01 SHEREISHRA BRIDGE 1985

Discharge rel. : Q = TDS/EC = 667

MONTH	Hm	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	1.92	5.94	1.46	974	5.79
FEB	2.46	7.98	3.41	2274	18.15
MAR	2.63	8.62	2.59	1728	14.90
APR	2.53	15.15	2.32	1547	23.44
MAY	2.70		1.99	1327	
JUN	2.44	9.28	1.26	840	7.80
JUL	2.54		1.97	1314	
AUG					
SEP	2.05		1.36	907	
OCT	2.03		1.81	1207	
NOV	2.11		2.45	1634	
DEC	2.17		3.02	2014	
YEAR	N A	N A	2.15	1434	N A
MIN	1.92	5.94	1.26	840	5.79
MAX	2.70	15.15	3.41	2274	23.44

Hm; Q and EC from field trips (3 weekly). Results indicative

WU02 SHEREISHRA P.S. 1985

All units : Q = 7.90 - 0.00 * head TDS/EC = 672

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	41.89	1459	1.73	41.49	1.79	1202	49.87
FEB	21.53	750	1.50	21.33	3.47	2332	49.74
MAR	35.89	1247	1.57	35.46	3.04	2042	72.42
APR	37.61	1307	1.67	37.17	2.73	1837	68.30
MAY	38.07	1323	1.48	37.62	2.93	1968	74.04
JUN	45.39	1573	1.51	44.73	2.06	1384	61.91
JUL	52.52	1825	1.76	51.90	2.73	1837	95.40
AUG	56.86	1971	1.66	56.05	2.56	1720	96.45
SEP	59.39	2046	1.78	58.18	2.54	1711	99.62
OCT	61.74	2144	1.69	60.97	2.47	1665	101.59
NOV	52.56	1825	1.95	51.90	2.43	1637	85.02
DEC	55.90	1897	1.76	53.95	2.75	1852	99.93
YEAR	559.35	19367	1.67	550.75	2.58	1733	954.29
MIN	21.53	750	1.48	21.33	1.79	1202	49.74
MAX	61.74	2144	1.95	60.97	3.47	2332	101.59

In first half year pumphours from MED; EC from routine measurements

WU1A MARKET BRIDGE 1985

Discharge relation : Q = 21.12*(W --2.62) TDS/EC = 653

MONTH	W.L. m.aMSL	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	-1.53	61.66	1.77	1156	71.28
FEB	-2.12	25.55	2.91	1899	48.52
MAR	-2.03	33.38	2.72	1773	59.21
APR	-1.98	34.88	2.69	1756	61.39
MAY	-2.05	32.02	2.60	1697	54.14
JUN	-1.97	35.21	2.72	1776	62.18
JUL	-1.87	42.46	2.78	1813	77.00
AUG	-1.68	53.27	2.68	1749	93.14
SEP	-1.60	55.65	2.43	1586	87.92
OCT	-1.41	67.83	2.18	1422	96.45
NOV	-1.57	57.15	2.75	1794	102.44
DEC	-1.47	64.74	2.78	1812	118.16
YEAR	-1.77	563.80	2.53	1653	931.83
MIN	-2.12	25.55	1.77	1156	48.52
MAX	-1.41	67.83	2.91	1899	118.16

Discharge estimated from a less reliable rating curve

WU03 TRUGA P.S. 1985

All units : Q = 10.83 - 1.37 * head TDS/EC = 664

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	46.05	1829	2.77	46.56	2.89	1918	89.33
FEB	24.33	967	2.84	24.27	5.29	3515	85.30
MAR	39.93	1588	2.64	41.23	3.96	2628	108.38
APR	41.02	1629	2.74	41.53	3.76	2496	103.65
MAY	52.84	1599	2.62	41.69	3.39	2250	93.80
JUN	43.36	1723	2.37	47.13	3.26	2164	102.01
JUL	49.78	1978	2.66	50.99	3.44	2287	116.62
AUG	56.74	2254	2.40	60.93	4.16	2761	168.26
SEP	57.82	2296	2.44	61.99	2.52	1673	103.71
OCT	66.78	2651	3.01	64.05	3.28	2177	139.44
NOV	59.97	2381	3.04	57.07	3.55	2356	134.50
DEC	60.40	2398	2.83	60.52	4.03	2675	161.94
YEAR	599.02	23293	2.70	597.96	3.54	2353	1406.94
MIN	24.33	967	2.37	24.27	2.52	1673	85.30
MAX	66.78	2651	3.04	64.05	5.29	3515	168.26

EC from routine measurements; pumphours from MED

WU04 DUSHUDI BRIDGE 1985

Discharge relation : Q = 0.52*Vpt*(198.00 + 33.60*W) TDS/EC = 661

MONTH	W.L. m.aMSL	V pt m/s	DISCHARGE mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	-1.90	0.51	96.12	3.08	2036	195.70
FEB	-2.16	0.37	57.93	4.27	2822	163.48
MAR	-2.10	0.40	71.27	3.55	2347	167.27
APR	-2.18	0.35	58.28	3.19	2109	122.91
MAY	-2.21	0.31	52.61	3.21	2122	111.64
JUN	-2.20	0.31	51.33	3.13	2069	106.20
JUL	-2.15	0.36	62.63	3.03	2003	125.45
AUG	-2.11	0.31	54.26	2.96	1957	106.19
SEP	-2.09	0.32	55.11	3.01	1990	109.67
OCT	-2.03	0.31	56.61	3.07	2029	114.86
NOV	-2.10	0.31	54.39	3.07	2029	110.36
DEC	-2.01	0.24	43.71	3.02	1996	87.25
YEAR	-2.10	0.34	714.25	3.22	2129	1520.98
MIN	-2.21	0.24	43.71	2.96	1957	87.25
MAX	-1.90	0.51	96.12	4.27	2822	195.70

Velocities from occasional measurements

WU05 DUSHUDI P.S. 1985

All units : Q = 10.32 - 2.01 * head TDS/EC = 641

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	22.25	1146	2.42	22.50	4.34	2781	62.56
FEB	17.18	861	2.27	17.84	7.48	4794	85.52
MAR	21.18	1101	2.35	22.18	4.86	3114	69.07
APR	17.35	1128	2.42	22.15	5.48	3515	77.86
MAY	23.82	1215	2.33	24.65	5.72	3665	90.35
JUN	23.70	1215	2.36	24.36	5.42	3473	84.61
JUL	25.01	1278	2.38	25.47	5.41	3471	88.40
AUG	27.55	1416	2.43	27.70	4.51	2890	80.05
SEP	28.85	1419	1.92	33.00	4.58	2935	96.86
OCT	28.90	1443	2.11	31.57	3.91	2505	79.09
NOV	26.72	1356	2.29	27.90	4.53	2902	80.98
DEC	26.85	1338	1.98	30.53	5.08	3258	99.47
YEAR	289.36	14916	2.27	309.85	5.01	3211	994.82
MIN	17.18	861	1.92	17.84	3.91	2505	62.56
MAX	28.90	1443	2.43	33.00	7.48	4794	99.47

Pumphours from MED; EC from routine measurements

WU06 HARES P.S. 1985

All units : Q = 11.44 - 1.73 * head TDS/EC = 652

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	61.70	2142	2.81	50.72	8.79	5730	290.66
FEB	40.10	1392	3.12	30.27	16.74	10914	330.37
MAR	50.26	1743	3.11	38.02	13.08	8527	324.21
APR	48.17	1671	3.12	36.34	11.05	7207	261.91
MAY	45.39	1599	3.10	34.98	13.76	8970	313.79
JUN	50.98	1770	3.11	38.61	9.30	6063	234.10
JUL	45.83	1590	3.10	34.78	11.27	7350	255.64
AUG	59.01	2046	3.11	44.63	10.81	7047	314.52
SEP	53.85	1869	3.16	40.19	10.84	7067	284.04
OCT	63.12	2190	3.15	47.22	9.38	6118	288.90
NOV	60.57	2100	3.17	45.02	10.31	6721	302.59
DEC	58.91	2043	2.94	46.73	13.18	8595	401.67
YEAR	637.89	22155	3.08	487.51	11.33	7389	3602.40
MIN	40.10	1392	2.81	30.27	8.79	5730	234.10
MAX	63.12	2190	3.17	50.72	16.74	10914	401.67

Pumphours from MED; EC from routine measurements

WU07 ABIES P.S. 1985

DIESEL : Q = 1.00 - 0.00 * head TDS/EC = 664
ELECTRIC : Q = 0.31 - 0.00 * head

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	4.34	3594	3.98	4.01	6.10	4050	16.24
FEB	2.21	1830	3.23	2.04	11.08	7357	15.02
MAR	3.74	3093	3.25	3.45	4.39	2914	10.06
APR	5.20	3708	3.04	4.88	7.91	5255	25.66
MAY	5.21	3839	3.30	4.90	7.83	5199	25.47
JUN	4.73	3616	3.11	4.43	8.21	5451	24.16
JUL	7.17	4346	2.78	6.83	6.41	4256	29.10
AUG	8.66	4570	2.32	8.65	5.00	3320	28.74
SEP	7.81	4237	2.35	7.21	3.90	2589	18.67
OCT	6.61	3623	2.50	6.47	4.89	3246	21.03
NOV	6.29	3720	2.44	6.02	6.50	4316	26.02
DEC	6.49	3491	2.47	6.33	5.42	3598	22.78
YEAR	68.46	43667	2.90	65.22	6.07	4032	262.95
MIN	2.21	1830	2.32	2.04	3.90	2589	10.06
MAX	8.66	4570	3.98	8.65	11.08	7357	29.10

Pumphours from MED; EC from routine measurements

WU08 QALAA P.S. 1985

NEW : Q = 3.50 - 0.00 * head TDS/EC = 638
OLD : Q = 2.65 - 0.00 * head

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	18.21	1732	3.59	18.23	3.73	2379	43.37
FEB	16.61	1527	3.67	16.41	4.35	2774	45.52
MAR	20.16	1797	3.60	19.10	3.30	2105	40.20
APR	19.88	1838	3.57	19.61	2.59	1655	32.44
MAY	19.79	1825	3.59	19.20	2.31	1472	28.27
JUN	19.13	1736	3.64	17.99	2.18	1390	25.00
JUL	20.14	1856	3.58	19.47	2.42	1546	30.10
AUG	20.25	1910	3.40	20.05	1.94	1237	24.80
SEP	20.90	1915	3.60	20.18	2.86	1824	36.80
OCT	22.48	2011	3.57	21.62	2.57	1642	35.49
NOV	17.22	1565	3.59	16.63	3.05	1945	32.33
DEC	19.63	1792	3.64	19.76	4.15	2647	52.30
YEAR	234.40	21504	3.59	228.25	2.93	1869	426.62
MIN	16.61	1527	3.40	16.41	1.94	1237	24.80
MAX	22.48	2011	3.67	21.62	4.35	2774	52.30

Pumphours partly from MED; EC from routine measurements

WU09 MAX P.S. 1985

GERMAN : Q = 16.80 - 1.60 * head TDS/EC = 640
JAPANESE : Q = 15.32 - 1.60 * head

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	274.22	5737	3.16	228.27	9.68	6195	1422.51
FEB	200.24	4224	3.33	164.07	11.02	7055	1161.34
MAR	225.61	4401	3.21	172.56	10.54	6747	1163.31
APR	233.65	4805	3.32	183.89	9.47	6061	1116.09
MAY	217.69	4423	3.33	168.69	9.10	5828	985.94
JUN	223.57	4535	3.33	174.44	8.32	5329	930.72
JUL	228.82	4655	3.32	177.87	8.79	5628	1004.07
AUG	253.73	5086	3.31	194.73	7.96	5100	991.38
SEP	240.99	4936	3.41	186.28	7.13	4562	850.80
OCT	283.79	5834	3.43	221.41	9.72	6226	1375.42
NOV	271.15	5585	3.40	213.54	7.43	4756	1015.95
DEC	292.00	5898	3.30	229.11	6.67	4268	979.43
YEAR	2945.46	60119	3.32	2314.86	8.77	5615	12996.96
MIN	200.24	4224	3.16	164.07	6.67	4268	850.80
MAX	292.00	5898	3.43	229.11	11.02	7055	1422.51

WU10 MARIUT KHALT P.S. 1985

All units : Q = 5.74 - 0.00 * head TDS/EC = 653

MONTH	Q med mill.m3	HOURS	HEAD m.	Q dri mill. m3	E.C. mS/cm	TDS g/m3	SALTLOAD mill. kg
JAN	0.00	0	6.50	0.00	N A	N A	N A
FEB	6.39	296	6.56	6.11	6.38	4284	26.17
MAR	15.10	713	6.72	14.73	4.20	2821	41.56
APR	11.94	562	6.76	11.61	N A	N A	N A
MAY	8.71	403	6.58	8.32	N A	N A	N A
JUN	13.12	597	6.66	12.33	N A	N A	N A
JUL	15.07	692	6.57	14.29	N A	N A	N A
AUG	16.02	741	6.53	15.31	N A	N A	N A
SEP	15.01	695	6.41	14.36	N A	N A	N A
OCT	15.05	692	6.26	14.29	N A	N A	N A
NOV	15.29	708	6.31	14.63	N A	N A	N A
DEC	16.18	740	6.15	15.29	3.79	2548	38.97
YEAR	147.88	6839	6.50	141.27	N A	N A	N A
MIN	0.00	0	6.15	0.00	0.00	0	0.00
MAX	16.18	741	6.76	15.31	6.38	4284	41.56

Pumphours from MED; EC from routine measurements

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PART B

1. INTRODUCTION

The growing population of Egypt requires an increase in the production of food and fibres. It also requires new land to substitute land lost due to newly built housings and roads. Four strategies have been developed to meet the requirements. Among others reuse of drainage water is a strategy to provide additional irrigation water for areas that will be reclaimed. In the five-year plan 1982-1987 for a total area of about 640,000 feddan (1 feddan = 0.42 ha) reclamation plans will be prepared, and a start will be made with the implementation.

The Reuse of Drainage Water Project aims to provide basic data, that can be used in the above mentioned planning. A measurement network has been established to provide these data. At drainage catchment level, discharges and drainage water quality are determined. Discharges from drainage pumping stations are calculated within the Reuse Project. Calibrations of these pumping stations are part of the Reuse Project activities and also provide data like operation hours and lifting head to calculate the discharges accurately. Discharges from areas drained by gravity are measured by appropriate methods depending on a number of constraints. Water samples at the locations shown in Fig. 1, Fig 5, and Fig. 10, (see Part A) are regularly taken. The chemical composition is determined and water quality parameters are calculated. Since 1985 on many open drainage locations salinity and level recorders have been installed. At pumping stations salinity observations have been made during this year, two times daily, by the pumping station engineers. The aim of this report is to present the basic chemical data in a suitable form for the potential user. A short description of the procedures that are followed, is included in this report.

The chemical parameters and chemical composition are derived from analysis of water samples taken during the 3 - weekly field trips. Application of these data for different purposes is beyond the scope of this report.

The cooperating institutes do not accept any responsibliliy for conclusions drawn on the basis of the data presented nor for the results of application of these data.

The year 1985 can be considered as the first year with continuous data collection from open locations and pumping stations using recorders and portable EC meters. This continuous recording means higher accuracy of electrical conductivity and discharges. However not all locations of the network could be equiped in a short period. Therefore, for some locations the results are based on the data collected and water sampled during field trips every 3 weeks.

2. DATA ELABORATION

2.1. Introduction

In this chapter an overview will be presented of the procedure of data elaboration. Two types of data are distinguished: discharges and chemical characteristics of the drainage water. Concerning the latter, the parameters given are the total dissolved salts, the electrical

conductivity, the sodium adsorption ratio and the adjusted sodium adsorption ratio. These parameters are calculated as monthly averages and weighted with respect to the discharges. The elaboration procedure for chemical analysis is in brief as follows: First entering the basic data on computer files. Then the total charge of both cations and anions is calculated. Simultaneously the electrical conductivity is calculated, based on the contribution of each ion to this conductivity. Results are listed and a manual check is performed. Deviations due to mistyping or wrong calculations are restored. If no reason can be found for the detected deviations, results are rejected. Discharges are obtained in different ways (PART A, chapter 1.).

For the production of this part of the yearbook the discharges and electrical conductivity elaborated in part A of this yearbook have been used. The reason for coupling the hydrological data (discharges and EC) and chemical data is that the hydrological data are based on continuous monitoring. Therefore it is a better estimation of the monthly EC values than would follow from about 15 samples per year.

If the average monthly EC values are available within the hydrological file, they are listed in the chemical yearbook. The other chemical parameters, as found from the samples, are then "tuned" to the hydrological EC values to obtain monthly average values for these parameters.

If the EC data in the hydrological files are not based on frequent measurements, all chemical parameters, including EC, are calculated monthly values, obtained by linear interpolation between the dates of sampling and weighed with the discharges, if available.

2.2. Data checking chemical analysis

At the DRI laboratory the concentration of Ca, Mg, Na, K, CO3, HCO3 and Cl has been determined. From the difference in total charge of the cations and the anions, the concentration of SO4, has been calculated. Also the EC and pH is measured. Data checking includes first the calculation of the total charge of the anions and the cations. If typing errors during data entry occur, the sum of the charges is not zero. A second check is obtained by calculating the electrical conductivity and comparing this value with the measured one. Basis for this calculation is the assumption, that the EC of a solution, containing several different ions, is the sum of the contributions of the single ions. For the latter empirical relationships have been developed (ROEST, 1983). If the difference between calculated and measured EC is more than 10 %, an error may be assumed and the original data must be compared with the entered data. In case of deviations the entered data are corrected, otherwise this set of data has been rejected for further elaborations.

2.3. Data presentation

The total discharge per year is calculated only in those situations that data of all months are available. The same holds for the average water quality parameters.

The salinity, expressed in parts per million (ppm), is calculated by multiplying the concentration of each ion (in meq/liter) by its atomic weight, divided by its charge, and adding the results.

The cationic composition of irrigation water determines its potential for sodium hazards for which the sodium adsorption ratio is a parameter. This parameter has been defined as:

$$SAR = \frac{[Na]}{(0.5([Ca] + [Mg]))^{0.5}}$$

where: SAR = sodium adsorption ratio (mmol$^{0.5}$.liter$^{-0.5}$)
[Na] = sodium concentration (meq/liter)
[Ca] = calcium concentration (meq/liter)
[Mg] = magnesium concentration (meq/liter)

In general irrigation water is classified in four categories with limits of the SAR value of 8, 12, and 18. When irrigation water has a SAR value exceeding 18 it is in general unsuitable for irrigation, except at low total salinity (TDS < 750) and using amendments.

A second parameter to classify the sodium hazard is the adjusted SAR. It has been defined as:

$$adj\ SAR = SAR(9.4 - pHc)$$

where: adj SAR = adjusted sodium adsorption ratio (mmol$^{0.5}$.liter$^{-0.5}$)
pHc = theoretical calculated pH value in equilibrium with lime

The pHc is defined as:

$$PHc = pK'2 - pK'c + p(Ca + Mg) + pAlk$$

where pK'2 = negative value of the second dissociation constant of H_2CO_3
pK'c = negative value of the logarithmof the solubility product of $CaCO_3$
p(Ca + Mg) = negative value of the logarithm of the molar concentration of calcium and magnesium
pAlk = the equivalent concentration of titratable base of CO_3 and HCO_3

At pHc values less than 8.4 the soluable calcium tends to precipiate, while at values greater than 8.4 there is a tendency to dissolve calcium carbonate (EL GUINDY, 1979). Values of adj SAR less than 6 do not cause permeablility problems when irrigation water is used with this value. Problems increase when the value is rising from 6 to 16. Severe permeability problems are expected when values rise above 16. Salinization hazards are classified by the total dissolved salt parameter, but are related to both drainage conditions and crop sensitivity. In general no problems have to be expected on poorly drained soils when the TDS is less than 750 ppm and when normal irrigation is practiced.

3. DISCHARGE AND CHEMICAL COMPOSITION EASTERN DELTA DURING 1985

LOCATION : EB01 BILBEIS BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	31.62	1.40	987.	7.24	4.63	10.35	.00	3.14	2.69	7.90	.56	.01	4.21	5.90	4.17
2	28.89	1.30	898.	7.27	4.30	9.39	.00	2.92	2.50	7.08	.52	.01	3.91	5.14	3.95
3	32.31	1.30	898.	7.27	4.30	9.39	.00	2.92	2.50	7.08	.52	.01	3.91	5.14	3.95
4	29.26	1.40	987.	7.24	4.63	10.35	.00	3.14	2.69	7.90	.56	.01	4.21	5.90	4.17
5	29.27	1.20	810.	7.30	3.98	8.44	.00	2.69	2.31	6.29	.48	.01	3.61	4.43	3.72
6	28.55	1.30	898.	7.27	4.30	9.39	.00	2.92	2.50	7.08	.52	.01	3.91	5.14	3.95
7	31.12	1.20	810.	7.30	3.98	8.44	.00	2.69	2.31	6.29	.48	.01	3.61	4.43	3.72
8	34.15	1.30	898.	7.27	4.30	9.39	.00	2.92	2.50	7.08	.52	.01	3.91	5.14	3.95
9	33.00	1.30	898.	7.27	4.30	9.39	.00	2.92	2.50	7.08	.52	.01	3.91	5.14	3.95
10	34.79	1.20	810.	7.30	3.98	8.44	.00	2.69	2.31	6.29	.48	.01	3.61	4.43	3.72
11	33.79	1.25	854.	7.28	4.14	8.92	.00	2.81	2.41	6.68	.50	.01	3.76	4.78	3.84
12	35.26	1.30	898.	7.27	4.30	9.39	.00	2.92	2.50	7.08	.52	.01	3.91	5.14	3.95
1985	382.01	1.29	886.	7.27	4.26	9.27	.00	2.89	2.48	6.98	.51	.01	3.87	5.05	3.92

LOCATION : EB02 QALYUBEYA BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	1.36	963.	7.28	4.01	8.87	.00	3.27	3.22	7.22	.43	.01	3.63	6.52	3.98
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	1.60	1174.	7.21	4.64	10.82	.00	3.85	3.79	9.07	.51	.01	4.27	8.25	4.68
4	-	1.47	1059.	7.25	4.30	9.76	.00	3.53	3.48	8.05	.46	.01	3.93	7.29	4.30
5	-	1.02	680.	7.41	3.09	6.16	.00	2.45	2.42	4.82	.32	.01	2.72	4.29	2.99
6	-	.98	648.	7.42	2.98	5.85	.00	2.36	2.32	4.55	.31	.01	2.62	4.05	2.87
7	-	.95	624.	7.44	2.89	5.61	.00	2.28	2.25	4.36	.30	.01	2.54	3.87	2.78
8	-	1.03	688.	7.40	3.11	6.24	.00	2.48	2.44	4.88	.33	.01	2.75	4.35	3.02
9	-	1.06	712.	7.39	3.20	6.47	.00	2.55	2.51	5.08	.33	.01	2.83	4.54	3.10
10	-	.99	656.	7.42	3.00	5.92	.00	2.38	2.35	4.62	.31	.01	2.64	4.11	2.90
11	-	1.05	704.	7.39	3.17	6.39	.00	2.52	2.49	5.02	.33	.01	2.80	4.47	3.07
12	-	1.21	836.	7.33	3.60	7.66	.00	2.91	2.87	6.12	.38	.01	3.23	5.50	3.54
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EB03 WADI P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	29.77	1.17	791.	7.45	3.57	7.45	.00	2.71	2.70	5.87	.39	.01	3.12	4.84	3.69
2	6.65	1.23	851.	7.43	3.82	8.12	.00	2.84	2.84	6.44	.41	.01	3.28	5.37	3.88
3	35.50	1.25	871.	7.43	3.91	8.35	.00	2.89	2.89	6.64	.41	.01	3.33	5.54	3.94
4	22.49	1.12	742.	7.47	3.36	6.91	.00	2.59	2.59	5.41	.37	.01	2.98	4.43	3.53
5	29.44	1.13	752.	7.47	3.40	7.02	.00	2.61	2.61	5.50	.37	.01	3.01	4.51	3.56
6	30.46	1.13	752.	7.47	3.40	7.02	.00	2.61	2.61	5.50	.37	.01	3.01	4.51	3.56
7	35.44	1.12	742.	7.47	3.36	6.91	.00	2.59	2.59	5.41	.37	.01	2.98	4.43	3.53
8	38.21	1.13	752.	7.47	3.40	7.02	.00	2.61	2.61	5.50	.37	.01	3.01	4.51	3.56
9	39.57	1.13	752.	7.47	3.40	7.02	.00	2.61	2.61	5.50	.37	.01	3.01	4.51	3.56
10	30.03	1.24	861.	7.43	3.87	8.23	.00	2.87	2.86	6.54	.41	.01	3.30	5.45	3.91
11	28.35	1.20	820.	7.44	3.70	7.78	.00	2.77	2.77	6.15	.40	.01	3.20	5.10	3.78
12	31.28	.82	477.	7.61	2.19	3.98	.00	1.90	1.89	3.02	.27	.01	2.18	2.30	2.59
1985	357.19	1.13	758.	7.47	3.44	7.10	.00	2.62	2.62	5.57	.37	.01	3.02	4.57	3.57

LOCATION : EB04 WADI RAILWAY BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	66.70	1.40	1011.	7.47	4.37	9.82	.00	3.40	3.00	7.81	.51	.02	4.00	6.64	4.04
2	46.67	1.20	790.	7.53	3.39	7.27	.00	2.91	2.57	5.62	.43	.02	3.43	4.62	3.46
3	48.31	1.10	679.	7.57	2.85	5.94	.00	2.67	2.35	4.52	.40	.02	3.15	3.60	3.17
4	35.77	1.20	790.	7.53	3.39	7.27	.00	2.91	2.57	5.62	.43	.02	3.43	4.62	3.46
5	39.42	1.20	790.	7.53	3.39	7.27	.00	2.91	2.57	5.62	.43	.02	3.43	4.62	3.46
6	42.01	1.10	679.	7.57	2.85	5.94	.00	2.67	2.35	4.52	.40	.02	3.15	3.60	3.17
7	45.71	1.20	790.	7.53	3.39	7.27	.00	2.91	2.57	5.62	.43	.02	3.43	4.62	3.46
8	40.95	1.20	790.	7.53	3.39	7.27	.00	2.91	2.57	5.62	.43	.02	3.43	4.62	3.46
9	45.04	1.20	790.	7.53	3.39	7.27	.00	2.91	2.57	5.62	.43	.02	3.43	4.62	3.46
10	37.06	1.30	900.	7.50	3.90	8.56	.00	3.15	2.78	6.71	.47	.02	3.72	5.63	3.75
11	51.03	1.30	900.	7.50	3.90	8.56	.00	3.15	2.78	6.71	.47	.02	3.72	5.63	3.75
12	60.18	1.10	679.	7.57	2.85	5.94	.00	2.67	2.35	4.52	.40	.02	3.15	3.60	3.17
1985	558.85	1.21	804.	7.53	3.46	7.43	.00	2.94	2.60	5.76	.44	.02	3.47	4.74	3.50

LOCATION : EB05 SAADA BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 11 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	82.00	.90	572.	7.50	2.70	5.16	.00	2.23	1.93	3.89	.33	.01	2.54	3.17	2.67
2	57.62	1.12	753.	7.40	3.36	7.00	.00	2.77	2.41	5.41	.41	.01	3.16	4.51	3.32
3	68.24	1.05	694.	7.43	3.15	6.41	.00	2.60	2.26	4.91	.39	.01	2.96	4.07	3.11
4	55.35	1.00	653.	7.45	3.00	5.99	.00	2.47	2.15	4.56	.37	.01	2.82	3.76	2.97
5	57.43	1.03	678.	7.44	3.09	6.24	.00	2.55	2.21	4.77	.38	.01	2.90	3.94	3.05
6	56.39	1.00	653.	7.45	3.00	5.99	.00	2.47	2.15	4.56	.37	.01	2.82	3.76	2.97
7	62.01	1.00	653.	7.45	3.00	5.99	.00	2.47	2.15	4.56	.37	.01	2.82	3.76	2.97
8	61.69	1.10	736.	7.41	3.30	6.83	.00	2.72	2.36	5.27	.41	.01	3.10	4.38	3.26
9	64.81	1.30	909.	7.34	3.91	8.58	.00	3.22	2.79	6.78	.48	.01	3.67	5.73	3.86
10	61.27	1.10	736.	7.41	3.30	6.83	.00	2.72	2.36	5.27	.41	.01	3.10	4.38	3.26
11	67.65	1.20	821.	7.37	3.61	7.70	.00	2.97	2.58	6.01	.44	.01	3.38	5.04	3.56
12	82.72	1.20	821.	7.37	3.61	7.70	.00	2.97	2.58	6.01	.44	.01	3.38	5.04	3.56
1985	777.18	1.08	724.	7.42	3.27	6.73	.00	2.68	2.33	5.18	.40	.01	3.06	4.30	3.22

LOCATION : EB06 SAADA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	2.03	1.15	740.	7.61	3.17	6.58	.00	2.81	2.70	5.27	.32	.02	2.94	3.94	4.20
2	1.51	1.30	882.	7.56	3.71	8.04	.00	3.18	3.05	6.56	.36	.02	3.32	5.21	4.59
3	2.07	1.18	768.	7.60	3.28	6.86	.00	2.88	2.77	5.51	.33	.02	3.01	4.19	4.28
4	1.96	1.01	617.	7.67	2.68	5.30	.00	2.47	2.37	4.17	.28	.02	2.58	2.88	3.82
5	1.67	1.06	660.	7.65	2.86	5.75	.00	2.59	2.49	4.55	.30	.02	2.71	3.25	3.95
6	1.68	1.07	669.	7.64	2.89	5.84	.00	2.61	2.51	4.63	.30	.02	2.73	3.32	3.98
7	2.49	.77	424.	7.78	1.89	3.33	.00	1.88	1.81	2.57	.21	.02	1.96	1.37	3.13
8	2.19	.75	409.	7.80	1.83	3.18	.00	1.83	1.76	2.45	.21	.02	1.91	1.26	3.07
9	1.59	.67	351.	7.85	1.58	2.60	.00	1.64	1.57	2.00	.19	.02	1.71	.85	2.82
10	2.55	.99	600.	7.68	2.62	5.13	.00	2.42	2.33	4.03	.28	.02	2.53	2.74	3.76
11	2.02	.77	424.	7.78	1.89	3.33	.00	1.88	1.81	2.57	.21	.02	1.96	1.37	3.13
12	2.70	.70	372.	7.83	1.67	2.81	.00	1.71	1.64	2.17	.20	.02	1.78	1.00	2.92
1985	24.46	.94	562.	7.70	2.51	4.80	.00	2.29	2.20	3.75	.26	.02	2.39	2.50	3.59

LOCATION : EB07 SAUD BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 10 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	92.75	1.00	624.	7.60	3.19	6.19	.00	2.28	1.98	4.65	.32	.02	2.71	3.10	3.41
2	69.67	1.30	881.	7.49	4.22	9.04	.00	2.96	2.57	7.02	.42	.02	3.52	5.00	4.43
3	78.87	1.20	793.	7.52	3.87	8.07	.00	2.73	2.38	6.19	.39	.02	3.25	4.33	4.09
4	67.05	1.30	881.	7.49	4.22	9.04	.00	2.96	2.57	7.02	.42	.02	3.52	5.00	4.43
5	68.59	1.20	793.	7.52	3.87	8.07	.00	2.73	2.38	6.19	.39	.02	3.25	4.33	4.09
6	64.65	1.20	793.	7.52	3.87	8.07	.00	2.73	2.38	6.19	.39	.02	3.25	4.33	4.09
7	71.33	1.20	793.	7.52	3.87	8.07	.00	2.73	2.38	6.19	.39	.02	3.25	4.33	4.09
8	72.27	1.23	819.	7.51	3.98	8.36	.00	2.80	2.44	6.43	.40	.02	3.33	4.53	4.19
9	75.24	1.10	707.	7.56	3.53	7.12	.00	2.51	2.18	5.40	.35	.02	2.98	3.69	3.75
10	73.30	1.20	793.	7.52	3.87	8.07	.00	2.73	2.38	6.19	.39	.02	3.25	4.33	4.09
11	77.64	1.20	793.	7.52	3.87	8.07	.00	2.73	2.38	6.19	.39	.02	3.25	4.33	4.09
12	87.97	1.20	793.	7.52	3.87	8.07	.00	2.73	2.38	6.19	.39	.02	3.25	4.33	4.09
1985	899.33	1.19	784.	7.53	3.84	7.98	.00	2.71	2.35	6.11	.38	.02	3.22	4.27	4.05

LOCATION : EB08 B.BAQAR BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	101.60	1.10	684.	7.48	3.08	6.25	.00	2.61	2.38	4.86	.34	.01	2.87	3.45	3.87
2	90.88	1.30	864.	7.41	3.80	8.18	.00	3.09	2.81	6.53	.40	.01	3.39	4.85	4.57
3	86.10	1.20	772.	7.44	3.43	7.19	.00	2.85	2.60	5.67	.37	.01	3.13	4.12	4.22
4	72.64	1.30	864.	7.41	3.80	8.18	.00	3.09	2.81	6.53	.40	.01	3.39	4.85	4.57
5	69.30	1.20	772.	7.44	3.43	7.19	.00	2.85	2.60	5.67	.37	.01	3.13	4.12	4.22
6	63.83	1.20	772.	7.44	3.43	7.19	.00	2.85	2.60	5.67	.37	.01	3.13	4.12	4.22
7	72.65	1.20	772.	7.44	3.43	7.19	.00	2.85	2.60	5.67	.37	.01	3.13	4.12	4.22
8	77.67	1.10	684.	7.48	3.08	6.25	.00	2.61	2.38	4.86	.34	.01	2.87	3.45	3.87
9	79.94	1.10	684.	7.48	3.08	6.25	.00	2.61	2.38	4.86	.34	.01	2.87	3.45	3.87
10	78.57	1.30	864.	7.41	3.80	8.18	.00	3.09	2.81	6.53	.40	.01	3.39	4.85	4.57
11	83.96	1.30	864.	7.41	3.80	8.18	.00	3.09	2.81	6.53	.40	.01	3.39	4.85	4.57
12	104.80	1.10	684.	7.48	3.08	6.25	.00	2.61	2.38	4.86	.34	.01	2.87	3.45	3.87
1985	981.94	1.20	770.	7.45	3.43	7.18	.00	2.84	2.59	5.65	.37	.01	3.12	4.11	4.20

LOCATION : EB09 B. BAQAR IRR. P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	3.78	.91	576.	7.43	2.65	5.09	.00	2.22	2.16	3.91	.35	.01	2.50	2.55	3.57
2	2.66	1.17	785.	7.32	3.37	7.14	.00	2.85	2.77	5.65	.45	.01	3.21	3.99	4.51
3	2.82	.96	615.	7.40	2.79	5.48	.00	2.34	2.27	4.23	.37	.01	2.63	2.81	3.76
4	2.39	1.14	760.	7.33	3.29	6.90	.00	2.78	2.70	5.44	.43	.01	3.13	3.81	4.40
5	2.43	1.20	810.	7.31	3.45	7.38	.00	2.92	2.84	5.86	.46	.01	3.29	4.17	4.61
6	2.27	1.20	810.	7.31	3.45	7.38	.00	2.92	2.84	5.86	.46	.01	3.29	4.17	4.61
7	4.49	1.03	671.	7.37	2.98	6.03	.00	2.51	2.44	4.69	.39	.01	2.82	3.19	4.01
8	3.72	1.14	760.	7.33	3.29	6.90	.00	2.78	2.70	5.44	.43	.01	3.13	3.81	4.40
9	3.52	1.02	663.	7.38	2.96	5.95	.00	2.48	2.42	4.63	.39	.01	2.80	3.13	3.97
10	3.92	1.14	760.	7.33	3.29	6.90	.00	2.78	2.70	5.44	.43	.01	3.13	3.81	4.40
11	3.61	1.04	679.	7.37	3.01	6.10	.00	2.53	2.46	4.76	.40	.01	2.85	3.24	4.04
12	3.60	.58	333.	7.62	1.72	2.65	.00	1.41	1.37	2.03	.22	.01	1.59	1.07	2.36
1985	39.21	1.03	674.	7.37	3.01	6.08	.00	2.51	2.44	4.74	.39	.01	2.82	3.24	4.00

LOCATION : EB10 B. BAQAR P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	15.70	6.40	3802.	7.84	14.03	31.08	.00	8.99	10.37	43.67	.54	.04	2.23	12.90	48.40
2	7.25	9.34	6049.	7.68	18.21	45.10	.00	13.91	15.14	69.39	.79	.04	3.26	28.87	67.05
3	12.00	6.58	3934.	7.83	14.31	31.96	.00	9.28	10.66	45.18	.55	.04	2.29	13.78	49.57
4	10.07	5.74	3325.	7.89	13.02	27.79	.00	7.93	9.30	38.22	.48	.03	2.00	9.83	44.06
5	10.84	5.24	2972.	7.93	12.23	25.26	.00	7.14	8.49	34.18	.44	.03	1.82	7.66	40.73
6	8.40	6.89	4163.	7.81	14.77	33.48	.00	9.79	11.17	47.80	.58	.04	2.40	15.32	51.58
7	13.24	6.08	3569.	7.86	13.55	29.49	.00	8.47	9.85	41.01	.51	.04	2.12	11.39	46.30
8	13.72	5.78	3354.	7.89	13.08	27.99	.00	7.99	9.37	38.54	.49	.03	2.01	10.01	44.33
9	15.35	5.67	3275.	7.89	12.91	27.44	.00	7.82	9.19	37.65	.48	.03	1.98	9.52	43.60
10	14.93	6.00	3511.	7.87	13.42	29.09	.00	8.34	9.72	40.35	.51	.03	2.09	11.02	45.78
11	16.54	6.62	3963.	7.83	14.37	32.16	.00	9.35	10.73	45.51	.56	.04	2.31	13.97	49.83
12	22.43	5.33	3035.	7.92	12.37	25.72	.00	7.28	8.64	34.90	.45	.03	1.86	8.04	41.33
1985	160.47	6.14	3621.	7.86	13.67	29.85	.00	8.58	9.95	41.60	.52	.04	2.14	11.83	46.64

LOCATION : EB11 B. BAQAR OUTFALL 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	3.54	2771.	6.94	10.97	29.24	.00	6.01	7.17	28.15	.97	.01	7.40	15.15	19.74
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	2.09	1434.	7.16	6.36	14.91	.00	4.04	4.23	12.93	.57	.01	4.37	7.91	9.48
4	-	1.39	885.	7.34	4.12	8.55	.00	3.08	2.82	7.08	.38	.01	2.90	5.07	5.37
5	-	1.26	791.	7.38	3.71	7.44	.00	2.91	2.55	6.13	.34	.01	2.63	4.60	4.69
6	-	1.82	1214.	7.22	5.50	12.40	.00	3.67	3.69	10.54	.50	.01	3.80	6.76	7.82
7	-	1.23	770.	7.39	3.61	7.19	.00	2.86	2.49	5.91	.34	.01	2.57	4.49	4.53
8	-	1.32	834.	7.36	3.90	7.95	.00	2.99	2.67	6.56	.36	.01	2.76	4.82	5.00
9	-	1.29	813.	7.37	3.80	7.70	.00	2.95	2.61	6.34	.35	.01	2.70	4.71	4.84
10	-	1.21	756.	7.40	3.55	7.02	.00	2.84	2.45	5.77	.33	.01	2.53	4.42	4.43
11	-	.74	447.	7.62	2.05	3.34	.00	2.20	1.50	2.79	.20	.01	1.54	2.90	2.23
12	-	2.12	1459.	7.16	6.46	15.19	.00	4.08	4.30	13.21	.58	.01	4.43	8.04	9.67
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EB12 BATIKH CANAL 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 11 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	1.08	738.	7.71	4.10	7.94	.00	2.21	2.17	6.07	.40	.02	2.69	4.71	3.42
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	1.61	1189.	7.54	5.70	12.77	.00	3.30	3.23	10.30	.60	.02	4.02	8.22	5.17
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	.73	464.	7.88	2.97	4.78	.00	1.49	1.47	3.61	.27	.02	1.82	2.72	2.28
6	-	1.06	722.	7.72	4.04	7.76	.00	2.17	2.13	5.92	.39	.02	2.64	4.59	3.35
7	-	.55	333.	8.01	2.35	3.19	.00	1.13	1.10	2.48	.20	.02	1.37	1.83	1.70
8	-	.67	420.	7.92	2.76	4.25	.00	1.37	1.35	3.22	.25	.02	1.67	2.41	2.09
9	-	.72	457.	7.89	2.93	4.69	.00	1.47	1.45	3.54	.27	.02	1.79	2.67	2.25
10	-	.46	270.	8.08	2.03	2.41	.00	.94	.92	1.96	.17	.02	1.14	1.42	1.41
11	-	1.25	879.	7.65	4.63	9.49	.00	2.56	2.51	7.37	.47	.02	3.12	5.78	3.98
12	-	.40	230.	8.14	1.81	1.90	.00	.82	.80	1.63	.15	.02	.99	1.16	1.22
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EF01 FARASQUR P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	17.04	2.49	1500.	7.59	7.11	14.81	.00	3.16	5.76	15.00	.54	.02	2.43	5.78	16.23
2	12.48	3.16	1936.	7.49	8.08	18.35	.00	4.01	7.57	19.44	.68	.02	3.08	7.05	21.55
3	18.14	3.32	2042.	7.47	8.30	19.15	.00	4.21	8.01	20.52	.72	.02	3.24	7.34	22.86
4	17.48	2.91	1773.	7.52	7.73	17.06	.00	3.69	6.89	17.77	.63	.02	2.84	6.58	19.54
5	20.31	2.47	1487.	7.60	7.07	14.70	.00	3.13	5.70	14.87	.53	.02	2.41	5.74	16.08
6	28.74	2.06	1224.	7.67	6.41	12.38	.00	2.61	4.63	12.20	.45	.02	2.01	4.92	12.95
7	32.45	1.85	1091.	7.72	6.05	11.13	.00	2.34	4.09	10.86	.40	.02	1.80	4.48	11.40
8	31.88	1.78	1047.	7.74	5.93	10.70	.00	2.26	3.92	10.41	.39	.02	1.73	4.33	10.89
9	32.32	1.79	1053.	7.74	5.94	10.77	.00	2.27	3.94	10.47	.39	.02	1.74	4.35	10.96
10	26.50	2.00	1186.	7.69	6.31	12.03	.00	2.53	4.48	11.82	.43	.02	1.95	4.79	12.50
11	24.05	2.32	1391.	7.62	6.84	13.87	.00	2.94	5.31	13.89	.50	.02	2.26	5.44	14.92
12	18.89	2.39	1436.	7.61	6.95	14.26	.00	3.03	5.49	14.35	.52	.02	2.33	5.58	15.46
1985	280.28	2.25	1348.	7.64	6.73	13.50	.00	2.85	5.15	13.47	.49	.02	2.19	5.28	14.46

LOCATION : EH01 SAFT EL QIBLY BR. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	1.40	912.	7.75	3.89	7.95	.00	3.35	3.29	7.09	.35	.02	2.49	5.31	6.25
2	-	1.20	788.	7.81	3.55	6.83	.00	2.93	2.82	6.01	.30	.02	2.13	5.08	4.82
3	-	1.44	937.	7.73	3.96	8.17	.00	3.44	3.38	7.30	.36	.02	2.56	5.33	6.56
4	-	2.03	1289.	7.58	4.83	11.20	.00	4.65	4.77	10.48	.50	.03	3.61	5.02	11.74
5	-	1.05	693.	7.87	3.27	5.94	.00	2.60	2.47	5.20	.26	.02	1.86	4.81	3.94
6	-	1.08	712.	7.86	3.33	6.12	.00	2.67	2.54	5.37	.27	.02	1.92	4.87	4.03
7	-	1.08	712.	7.86	3.33	6.12	.00	2.67	2.54	5.37	.27	.02	1.92	4.87	4.03
8	-	1.29	844.	7.78	3.70	7.34	.00	3.12	3.03	6.50	.32	.02	2.29	5.20	5.44
9	-	1.18	775.	7.82	3.51	6.71	.00	2.88	2.77	5.90	.29	.02	2.10	5.05	4.68
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	1.22	801.	7.81	3.58	6.94	.00	2.97	2.86	6.12	.30	.02	2.17	5.11	4.95
12	-	1.37	894.	7.75	3.84	7.79	.00	3.29	3.22	6.93	.34	.02	2.43	5.28	6.03
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EH02 HANUT P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	13.22	1.36	916.	7.65	4.15	8.48	.00	3.36	2.88	7.33	.34	.02	2.60	5.74	5.55
2	7.25	1.06	681.	7.75	3.28	6.06	.00	2.62	2.25	5.12	.27	.02	2.03	4.66	3.54
3	19.76	1.23	815.	7.69	3.79	7.45	.00	3.03	2.61	6.37	.31	.02	2.36	5.32	4.63
4	24.15	1.43	970.	7.62	4.33	9.02	.00	3.53	3.03	7.85	.36	.02	2.74	5.93	6.08
5	29.74	1.04	666.	7.76	3.22	5.89	.00	2.57	2.21	4.97	.26	.02	1.99	4.58	3.42
6	29.35	1.11	721.	7.73	3.44	6.47	.00	2.74	2.35	5.49	.28	.02	2.12	4.87	3.84
7	31.18	1.11	721.	7.73	3.44	6.47	.00	2.74	2.35	5.49	.28	.02	2.12	4.87	3.84
8	28.75	1.28	854.	7.67	3.93	7.85	.00	3.16	2.72	6.74	.32	.02	2.45	5.49	4.98
9	34.06	1.15	752.	7.72	3.56	6.80	.00	2.84	2.44	5.78	.29	.02	2.20	5.03	4.10
10	25.68	1.06	681.	7.75	3.28	6.06	.00	2.62	2.25	5.12	.27	.02	2.03	4.66	3.54
11	17.33	1.28	854.	7.67	3.93	7.85	.00	3.16	2.72	6.74	.32	.02	2.45	5.49	4.98
12	23.07	1.14	744.	7.72	3.53	6.72	.00	2.81	2.42	5.71	.29	.02	2.18	4.99	4.03
1985	283.54	1.18	775.	7.71	3.65	7.04	.00	2.91	2.50	6.00	.30	.02	2.26	5.11	4.32

LOCATION : EH03 SADAQA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	10.84	1.70	1011.	7.85	5.06	9.69	.00	3.25	3.40	9.23	.32	.02	1.98	4.43	9.76
2	3.90	2.45	1628.	7.70	7.28	15.92	.00	4.68	4.90	15.93	.46	.03	2.86	7.78	15.30
3	7.34	2.19	1405.	7.74	6.51	13.71	.00	4.18	4.38	13.47	.41	.03	2.55	6.54	13.33
4	7.13	2.02	1264.	7.78	6.01	12.29	.00	3.86	4.04	11.94	.38	.03	2.35	5.77	12.07
5	7.16	2.09	1322.	7.76	6.22	12.87	.00	3.99	4.18	12.57	.39	.03	2.44	6.08	12.58
6	7.11	1.99	1240.	7.79	5.92	12.05	.00	3.80	3.98	11.68	.37	.03	2.32	5.64	11.84
7	10.89	2.38	1567.	7.71	7.07	15.32	.00	4.54	4.76	15.26	.45	.03	2.78	7.44	14.77
8	12.23	1.74	1042.	7.84	5.18	10.01	.00	3.32	3.48	9.56	.33	.02	2.03	4.59	10.04
9	13.88	1.85	1128.	7.82	5.51	10.90	.00	3.53	3.70	10.47	.35	.02	2.16	5.04	10.83
10	12.84	1.79	1081.	7.83	5.33	10.41	.00	3.42	3.58	9.97	.34	.02	2.09	4.80	10.40
11	8.84	2.13	1355.	7.76	6.34	13.21	.00	4.07	4.26	12.93	.40	.03	2.48	6.26	12.88
12	10.21	2.29	1490.	7.73	6.81	14.56	.00	4.37	4.58	14.40	.43	.03	2.67	7.00	14.08
1985	112.37	2.01	1259.	7.78	6.01	12.26	.00	3.83	4.01	11.90	.38	.03	2.34	5.76	12.00

LOCATION : EH04 NIZAM BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	22.77	2.20	1505.	7.08	6.11	14.41	.00	4.91	4.59	13.32	.66	.01	4.06	6.69	12.71
2	11.47	2.00	1353.	7.12	5.71	13.07	.00	4.42	4.17	11.84	.60	.01	3.69	6.28	11.04
3	19.84	1.30	835.	7.31	4.20	8.21	.00	2.75	2.71	6.94	.39	.01	2.40	4.56	5.83
4	17.25	1.30	835.	7.31	4.20	8.21	.00	2.75	2.71	6.94	.39	.01	2.40	4.56	5.83
5	18.62	1.00	622.	7.42	3.49	6.04	.00	2.06	2.08	5.02	.30	.01	1.85	3.66	3.95
6	19.22	1.00	622.	7.42	3.49	6.04	.00	2.06	2.08	5.02	.30	.01	1.85	3.66	3.95
7	24.55	1.10	692.	7.38	3.73	6.77	.00	2.29	2.29	5.65	.33	.01	2.03	3.97	4.55
8	25.89	1.20	763.	7.34	3.97	7.49	.00	2.52	2.50	6.29	.36	.01	2.21	4.27	5.18
9	25.53	1.30	835.	7.31	4.20	8.21	.00	2.75	2.71	6.94	.39	.01	2.40	4.56	5.83
10	23.43	1.10	692.	7.38	3.73	6.77	.00	2.29	2.29	5.65	.33	.01	2.03	3.97	4.55
11	16.61	1.20	763.	7.34	3.97	7.49	.00	2.52	2.50	6.29	.36	.01	2.21	4.27	5.18
12	22.49	1.10	692.	7.38	3.73	6.77	.00	2.29	2.29	5.65	.33	.01	2.03	3.97	4.55
1985	247.67	1.30	835.	7.31	4.23	8.25	.00	2.75	2.70	6.98	.39	.01	2.39	4.48	5.94

LOCATION : EH05 NIZAM P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	16.70	1.40	889.	7.67	4.49	8.74	.00	3.04	2.76	7.65	.31	.02	2.27	4.91	6.56
2	7.29	2.30	1590.	7.46	6.79	15.73	.00	4.99	4.53	14.83	.51	.02	3.74	7.82	13.28
3	11.43	1.43	911.	7.66	4.57	8.97	.00	3.10	2.81	7.87	.32	.02	2.32	5.01	6.76
4	13.15	1.37	867.	7.68	4.41	8.50	.00	2.97	2.70	7.43	.30	.02	2.22	4.80	6.36
5	13.08	1.08	658.	7.79	3.62	6.27	.00	2.34	2.13	5.41	.24	.02	1.75	3.82	4.53
6	14.65	1.12	686.	7.77	3.73	6.58	.00	2.43	2.20	5.68	.25	.02	1.82	3.96	4.77
7	15.97	1.25	779.	7.72	4.09	7.58	.00	2.71	2.46	6.58	.28	.02	2.03	4.40	5.58
8	18.07	1.29	808.	7.71	4.20	7.89	.00	2.80	2.54	6.86	.28	.02	2.09	4.53	5.84
9	20.70	1.20	743.	7.74	3.95	7.19	.00	2.61	2.36	6.23	.26	.02	1.95	4.23	5.27
10	17.30	1.07	651.	7.79	3.59	6.20	.00	2.32	2.11	5.35	.24	.02	1.74	3.78	4.47
11	10.77	1.20	743.	7.74	3.95	7.19	.00	2.61	2.36	6.23	.26	.02	1.95	4.23	5.27
12	16.24	1.01	609.	7.81	3.42	5.74	.00	2.19	1.99	4.95	.22	.02	1.64	3.58	4.12
1985	175.35	1.26	790.	7.72	4.15	7.72	.00	2.74	2.48	6.70	.28	.02	2.05	4.43	5.71

LOCATION : EH06 BANI EBEID P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	26.18	2.51	1584.	7.51	6.13	13.88	.00	5.65	5.36	14.38	.44	.02	3.01	5.29	17.50
2	12.61	1.94	1185.	7.62	5.06	10.47	.00	4.22	4.14	10.35	.34	.02	2.33	5.13	11.58
3	21.77	2.70	1720.	7.47	6.47	15.00	.00	6.13	5.76	15.78	.48	.02	3.24	5.22	19.67
4	20.67	1.74	1048.	7.66	4.67	9.25	.00	3.73	3.71	9.01	.31	.02	2.09	4.93	9.73
5	20.38	1.85	1123.	7.64	4.89	9.92	.00	4.00	3.95	9.75	.33	.02	2.22	5.05	10.73
6	21.19	1.47	867.	7.74	4.12	7.59	.00	3.09	3.14	7.27	.26	.02	1.76	4.55	7.43
7	33.58	2.13	1317.	7.58	5.43	11.61	.00	4.69	4.54	11.66	.38	.02	2.55	5.25	13.45
8	35.90	1.97	1206.	7.61	5.12	10.65	.00	4.29	4.20	10.56	.35	.02	2.36	5.15	11.87
9	37.08	1.78	1076.	7.65	4.75	9.50	.00	3.83	3.80	9.28	.31	.02	2.13	4.98	10.09
10	29.90	1.73	1042.	7.67	4.65	9.19	.00	3.71	3.69	8.95	.31	.02	2.07	4.92	9.64
11	23.96	1.90	1158.	7.63	4.99	10.23	.00	4.12	4.05	10.08	.34	.02	2.28	5.10	11.20
12	31.44	1.76	1062.	7.66	4.71	9.37	.00	3.78	3.76	9.15	.31	.02	2.11	4.96	9.91
1985	314.66	1.95	1196.	7.61	5.11	10.59	.00	4.26	4.17	10.49	.34	.02	2.34	5.05	11.85

LOCATION : EH07 ADD. QASSABI P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	19.60	2.38	1453.	7.74	6.59	13.50	.00	4.31	4.65	13.95	.33	.02	2.21	7.74	13.26
2	9.02	2.45	1503.	7.73	6.70	13.88	.00	4.49	4.78	14.43	.34	.02	2.28	7.91	13.84
3	20.29	2.04	1218.	7.81	6.04	11.57	.00	3.46	3.98	11.66	.28	.02	1.90	6.88	10.58
4	18.10	2.64	1637.	7.70	6.99	14.91	.00	4.99	5.16	15.75	.37	.02	2.46	8.35	15.43
5	16.91	2.02	1205.	7.82	6.01	11.46	.00	3.41	3.95	11.52	.28	.02	1.88	6.83	10.43
6	20.79	2.37	1446.	7.75	6.58	13.44	.00	4.28	4.63	13.88	.33	.02	2.20	7.72	13.18
7	31.80	2.27	1377.	7.77	6.42	12.88	.00	4.03	4.43	13.20	.32	.02	2.11	7.47	12.37
8	37.62	2.27	1377.	7.77	6.42	12.88	.00	4.03	4.43	13.20	.32	.02	2.11	7.47	12.37
9	36.97	2.25	1363.	7.77	6.39	12.77	.00	3.98	4.39	13.07	.31	.02	2.09	7.42	12.21
10	30.50	1.87	1103.	7.85	5.75	10.58	.00	3.05	3.65	10.53	.26	.02	1.74	6.42	9.32
11	18.88	2.28	1384.	7.76	6.44	12.94	.00	4.05	4.45	13.27	.32	.02	2.12	7.50	12.45
12	26.87	1.88	1110.	7.85	5.77	10.64	.00	3.08	3.67	10.60	.26	.02	1.75	6.45	9.39
1985	287.35	2.20	1331.	7.78	6.31	12.51	.00	3.87	4.30	12.75	.31	.02	2.05	7.29	11.67

LOCATION : EH08 MAIN QASSABI P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	18.52	4.30	2698.	7.73	9.81	21.91	.00	8.01	8.06	27.81	.48	.03	2.42	11.79	30.11
2	8.95	4.40	2770.	7.72	9.99	22.47	.00	8.19	8.25	28.64	.49	.03	2.48	11.97	31.09
3	15.49	4.80	3061.	7.69	10.69	24.68	.00	8.94	9.00	32.00	.53	.03	2.71	12.66	35.07
4	16.36	5.30	3430.	7.64	11.54	27.44	.00	9.87	9.94	36.31	.59	.03	2.99	13.45	40.24
5	16.65	3.80	2341.	7.79	8.92	19.12	.00	7.08	7.12	23.76	.42	.03	2.14	10.84	25.37
6	26.71	5.10	3281.	7.66	11.20	26.34	.00	9.50	9.56	34.57	.56	.03	2.88	13.14	38.15
7	36.78	4.30	2698.	7.73	9.81	21.91	.00	8.01	8.06	27.81	.48	.03	2.42	11.79	30.11
8	38.48	3.70	2271.	7.80	8.73	18.56	.00	6.89	6.94	22.96	.41	.03	2.08	10.64	24.45
9	37.02	3.30	1992.	7.85	7.99	16.30	.00	6.14	6.19	19.84	.37	.03	1.86	9.79	20.86
10	32.15	3.50	2131.	7.82	8.37	17.43	.00	6.52	6.56	21.39	.39	.03	1.97	10.22	22.64
11	21.52	3.50	2131.	7.82	8.37	17.43	.00	6.52	6.56	21.39	.39	.03	1.97	10.22	22.64
12	26.55	2.90	1718.	7.90	7.23	14.03	.00	5.40	5.44	16.83	.32	.03	1.63	8.89	17.44
1985	295.18	3.95	2543.	7.76	9.46	20.76	.00	7.59	7.64	26.11	.45	.03	2.30	11.28	28.18

LOCATION : EH09 GENEENA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	14.25	1.38	841.	7.68	4.80	8.71	.00	2.53	2.62	7.71	.31	.02	1.93	4.25	6.98
2	14.45	2.70	1681.	7.39	7.67	17.67	.00	4.00	5.28	16.54	.61	.02	3.78	7.96	14.67
3	20.11	1.11	674.	7.78	4.12	6.76	.00	2.18	2.09	6.02	.25	.01	1.55	3.49	5.46
4	12.23	1.29	785.	7.71	4.58	8.07	.00	2.42	2.44	7.14	.29	.01	1.80	4.00	6.47
5	8.89	1.30	791.	7.71	4.60	8.14	.00	2.43	2.46	7.20	.29	.02	1.82	4.03	6.53
6	16.01	1.09	662.	7.78	4.06	6.61	.00	2.16	2.05	5.89	.25	.01	1.52	3.44	5.37
7	23.36	1.09	662.	7.78	4.06	6.61	.00	2.16	2.05	5.89	.25	.01	1.52	3.44	5.37
8	24.77	.99	600.	7.83	3.79	5.88	.00	2.02	1.85	5.28	.22	.01	1.38	3.15	4.83
9	22.09	.98	594.	7.83	3.77	5.81	.00	2.01	1.83	5.22	.22	.01	1.37	3.13	4.77
10	15.08	1.18	717.	7.75	4.30	7.27	.00	2.28	2.23	6.45	.27	.01	1.65	3.69	5.86
11	12.08	1.41	860.	7.67	4.87	8.93	.00	2.57	2.68	7.90	.32	.02	1.97	4.34	7.14
12	13.68	1.29	785.	7.71	4.58	8.07	.00	2.42	2.44	7.14	.29	.01	1.80	4.00	6.47
1985	197.00	1.27	774.	7.72	4.56	7.97	.00	2.37	2.41	7.05	.29	.01	1.77	3.94	6.39

LOCATION : EH10 ERAD P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	39.10	2.89	1784.	7.66	7.88	16.48	.00	4.68	5.80	18.03	.44	.02	2.26	8.41	18.24
2	21.78	2.65	1602.	7.70	7.33	14.85	.00	4.29	5.31	16.05	.40	.02	2.07	7.23	16.73
3	39.84	2.59	1557.	7.71	7.19	14.44	.00	4.19	5.19	15.57	.39	.02	2.03	6.95	16.35
4	36.53	2.52	1505.	7.72	7.02	13.96	.00	4.08	5.05	15.00	.38	.02	1.97	6.62	15.91
5	29.11	2.65	1602.	7.70	7.33	14.85	.00	4.29	5.31	16.05	.40	.02	2.07	7.23	16.73
6	42.18	2.86	1761.	7.66	7.81	16.27	.00	4.63	5.74	17.78	.43	.02	2.24	8.26	18.05
7	61.51	2.66	1609.	7.69	7.35	14.91	.00	4.30	5.33	16.13	.40	.02	2.08	7.28	16.79
8	66.55	2.21	1279.	7.77	6.29	11.86	.00	3.58	4.43	12.58	.33	.02	1.73	5.23	13.95
9	64.57	2.13	1222.	7.79	6.10	11.33	.00	3.45	4.27	11.98	.32	.02	1.66	4.89	13.44
10	54.72	2.34	1373.	7.75	6.60	12.74	.00	3.79	4.69	13.59	.35	.02	1.83	5.80	14.77
11	39.78	2.45	1453.	7.73	6.86	13.49	.00	3.96	4.91	14.45	.37	.02	1.92	6.30	15.46
12	43.12	2.60	1564.	7.70	7.21	14.51	.00	4.21	5.21	15.65	.39	.02	2.03	7.00	16.41
1985	538.79	2.50	1496.	7.72	7.00	13.89	.00	4.05	5.02	14.92	.38	.02	1.96	6.58	15.81

LOCATION : EH11 B.HADUS BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	157.49	1.90	1085.	7.65	5.18	9.97	.00	3.62	3.70	9.92	.30	.01	1.91	4.61	11.01
2	75.79	2.50	1552.	7.53	6.79	14.47	.00	4.77	4.87	14.91	.39	.02	2.52	7.21	15.20
3	120.89	1.80	1012.	7.67	4.91	9.24	.00	3.43	3.51	9.15	.28	.01	1.81	4.22	10.33
4	83.64	1.90	1085.	7.65	5.18	9.97	.00	3.62	3.70	9.92	.30	.01	1.91	4.61	11.01
5	84.98	1.80	1012.	7.67	4.91	9.24	.00	3.43	3.51	9.15	.28	.01	1.81	4.22	10.33
6	70.29	1.70	940.	7.70	4.64	8.52	.00	3.24	3.31	8.41	.26	.01	1.71	3.85	9.66
7	129.05	2.20	1313.	7.59	5.99	12.19	.00	4.20	4.29	12.33	.34	.02	2.21	5.86	13.08
8	164.91	2.20	1313.	7.59	5.99	12.19	.00	4.20	4.29	12.33	.34	.02	2.21	5.86	13.08
9	205.30	2.10	1236.	7.61	5.72	11.44	.00	4.01	4.09	11.51	.33	.02	2.11	5.43	12.36
10	200.75	2.20	1313.	7.59	5.99	12.19	.00	4.20	4.29	12.33	.34	.02	2.21	5.86	13.08
11	135.82	2.40	1471.	7.55	6.52	13.70	.00	4.58	4.68	14.04	.37	.02	2.42	6.75	14.49
12	182.71	2.20	1313.	7.59	5.99	12.19	.00	4.20	4.29	12.33	.34	.02	2.21	5.86	13.08
1985	1611.62	2.10	1239.	7.61	5.74	11.48	.00	4.01	4.10	11.55	.33	.02	2.11	5.46	12.40

LOCATION : EH12 SAFT P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 10 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	42.48	3.01	1827.	7.51	6.60	15.46	.00	6.89	6.08	16.81	.45	.02	3.25	4.53	22.43
2	19.16	4.01	2440.	7.38	7.62	19.37	.00	9.18	8.10	22.40	.60	.02	4.33	.00	38.23
3	38.60	2.88	1758.	7.52	6.46	14.92	.00	6.60	5.82	16.09	.43	.02	3.11	5.14	20.67
4	38.12	2.45	1524.	7.60	5.95	13.05	.00	5.61	4.95	13.68	.37	.02	2.64	6.65	15.30
5	44.41	2.63	1623.	7.56	6.17	13.85	.00	6.02	5.31	14.69	.39	.02	2.84	6.10	17.46
6	30.67	2.60	1607.	7.57	6.13	13.71	.00	5.95	5.25	14.52	.39	.02	2.80	6.20	17.09
7	49.76	2.54	1574.	7.58	6.06	13.45	.00	5.82	5.13	14.19	.38	.02	2.74	6.39	16.36
8	52.16	2.44	1519.	7.60	5.94	13.00	.00	5.59	4.93	13.63	.36	.02	2.63	6.67	15.19
9	60.43	2.49	1546.	7.59	6.00	13.23	.00	5.70	5.03	13.91	.37	.02	2.69	6.54	15.77
10	60.87	2.52	1563.	7.58	6.04	13.36	.00	5.77	5.09	14.07	.38	.02	2.72	6.45	16.12
11	46.54	2.49	1546.	7.59	6.00	13.23	.00	5.70	5.03	13.91	.37	.02	2.69	6.54	15.77
12	58.56	2.67	1645.	7.56	6.22	14.02	.00	6.11	5.39	14.91	.40	.02	2.88	5.97	17.95
1985	541.76	2.65	1636.	7.56	6.19	13.93	.00	6.07	5.35	14.80	.40	.02	2.86	5.93	17.89

LOCATION : EH13 B. HADUS OUTFALL 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	2.56	1564.	7.57	6.51	14.00	.00	5.06	5.26	14.80	.40	.02	2.50	6.02	16.98
3	-	2.53	1549.	7.57	6.47	13.86	.00	5.00	5.20	14.62	.39	.02	2.47	6.16	16.57
4	-	2.84	1707.	7.52	6.86	15.28	.00	5.62	5.83	16.41	.44	.02	2.77	4.44	21.08
5	-	2.20	1372.	7.63	6.04	12.27	.00	4.35	4.52	12.72	.34	.02	2.14	7.38	12.39
6	-	2.54	1554.	7.57	6.49	13.91	.00	5.02	5.22	14.68	.39	.02	2.48	6.11	16.71
7	-	2.50	1533.	7.58	6.44	13.72	.00	4.95	5.14	14.45	.39	.02	2.44	6.30	16.17
8	-	2.33	1443.	7.61	6.21	12.91	.00	4.61	4.79	13.47	.36	.02	2.27	6.97	13.96
9	-	2.29	1421.	7.62	6.16	12.71	.00	4.53	4.70	13.24	.35	.02	2.23	7.11	13.47
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	2.22	1383.	7.63	6.06	12.37	.00	4.39	4.56	12.83	.34	.02	2.16	7.32	12.63
12	-	2.46	1512.	7.59	6.38	13.53	.00	4.87	5.05	14.22	.38	.02	2.40	6.47	15.63
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EH14 GEMEEZA BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	29.22	1.50	1106.	7.43	4.67	10.15	.00	3.77	3.52	8.92	.46	.01	3.13	7.48	6.05
2	15.97	1.40	999.	7.46	4.25	9.03	.00	3.52	3.29	7.84	.42	.01	2.92	6.62	5.52
3	15.05	1.10	706.	7.57	3.05	5.93	.00	2.77	2.58	4.99	.33	.01	2.29	4.37	4.00
4	9.21	1.20	799.	7.53	3.44	6.91	.00	3.02	2.82	5.87	.36	.01	2.50	5.07	4.49
5	12.79	.90	534.	7.66	2.32	4.14	.00	2.26	2.11	3.43	.27	.01	1.88	3.12	3.06
6	13.21	.80	455.	7.71	1.97	3.33	.00	2.01	1.88	2.75	.24	.01	1.67	2.58	2.62
7	18.57	1.00	618.	7.61	2.68	5.00	.00	2.51	2.35	4.17	.30	.01	2.08	3.72	3.52
8	22.42	1.20	799.	7.53	3.44	6.91	.00	3.02	2.82	5.87	.36	.01	2.50	5.07	4.49
9	27.03	1.10	706.	7.57	3.05	5.93	.00	2.77	2.58	4.99	.33	.01	2.29	4.37	4.00
10	27.90	1.10	706.	7.57	3.05	5.93	.00	2.77	2.58	4.99	.33	.01	2.29	4.37	4.00
11	22.82	1.30	897.	7.50	3.84	7.94	.00	3.27	3.05	6.82	.39	.01	2.71	5.82	5.00
12	29.22	1.20	799.	7.53	3.44	6.91	.00	3.02	2.82	5.87	.36	.01	2.50	5.07	4.49
1985	243.41	1.18	785.	7.54	3.41	6.81	.00	2.96	2.76	5.78	.36	.01	2.45	4.99	4.40

LOCATION : EH15 IDDOWWAR BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	59.84	1.40	894.	7.48	4.39	8.35	.00	2.89	3.11	7.61	.31	.01	2.04	5.29	6.57
2	39.00	2.10	1303.	7.30	5.38	11.93	.00	4.34	4.66	11.41	.46	.01	3.06	4.93	12.86
3	50.55	1.30	834.	7.51	4.23	7.78	.00	2.69	2.89	7.06	.28	.01	1.89	5.20	5.81
4	36.64	1.50	954.	7.45	4.54	8.89	.00	3.10	3.33	8.15	.33	.01	2.19	5.34	7.37
5	43.11	1.40	894.	7.48	4.39	8.35	.00	2.89	3.11	7.61	.31	.01	2.04	5.29	6.57
6	46.23	1.30	834.	7.51	4.23	7.78	.00	2.69	2.89	7.06	.28	.01	1.89	5.20	5.81
7	67.58	1.30	834.	7.51	4.23	7.78	.00	2.69	2.89	7.06	.28	.01	1.89	5.20	5.81
8	72.62	1.50	954.	7.45	4.54	8.89	.00	3.10	3.33	8.15	.33	.01	2.19	5.34	7.37
9	77.55	1.40	894.	7.48	4.39	8.35	.00	2.89	3.11	7.61	.31	.01	2.04	5.29	6.57
10	73.95	1.30	834.	7.51	4.23	7.78	.00	2.69	2.89	7.06	.28	.01	1.89	5.20	5.81
11	51.90	1.50	954.	7.45	4.54	8.89	.00	3.10	3.33	8.15	.33	.01	2.19	5.34	7.37
12	66.47	1.40	894.	7.48	4.39	8.35	.00	2.89	3.11	7.61	.31	.01	2.04	5.29	6.57
1985	685.44	1.43	911.	7.47	4.44	8.50	.00	2.95	3.17	7.76	.31	.01	2.08	5.25	6.85

LOCATION : EH16 ARIN DRAIN 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 11 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	2.38	1731.	7.35	7.33	17.50	.00	4.49	4.88	15.85	.63	.02	4.52	12.79	8.53
4	-	1.22	778.	7.64	3.85	7.41	.00	2.73	2.50	6.22	.32	.02	2.31	4.87	4.57
5	-	.88	533.	7.78	2.80	4.70	.00	2.14	1.80	3.94	.23	.02	1.67	3.06	3.37
6	-	1.35	876.	7.60	4.24	8.49	.00	2.94	2.77	7.17	.36	.02	2.56	5.63	5.03
7	-	.93	568.	7.76	2.96	5.09	.00	2.23	1.91	4.25	.25	.02	1.76	3.30	3.55
8	-	1.29	831.	7.62	4.06	7.99	.00	2.84	2.64	6.73	.34	.02	2.45	5.27	4.82
9	-	.93	568.	7.76	2.96	5.09	.00	2.23	1.91	4.25	.25	.02	1.76	3.30	3.55
10	-	.69	404.	7.89	2.22	3.27	.00	1.78	1.41	2.80	.18	.01	1.31	2.17	2.69
11	-	1.33	861.	7.60	4.18	8.33	.00	2.91	2.73	7.02	.35	.02	2.52	5.51	4.96
12	-	1.09	682.	7.69	3.45	6.36	.00	2.51	2.23	5.31	.29	.02	2.07	4.14	4.12
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EM01 MATARIA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	20.63	5.78	3538.	7.74	14.14	32.12	.00	5.04	11.77	40.98	.91	.03	2.72	13.35	42.60
2	13.65	6.11	3740.	7.72	14.53	33.60	.00	5.32	12.44	43.32	.96	.03	2.88	14.11	45.03
3	21.90	6.34	3881.	7.70	14.81	34.61	.00	5.52	12.91	44.95	1.00	.03	2.98	14.64	46.73
4	17.65	6.16	3771.	7.71	14.59	33.82	.00	5.37	12.55	43.67	.97	.03	2.90	14.23	45.40
5	18.47	6.29	3850.	7.70	14.75	34.39	.00	5.48	12.81	44.60	.99	.03	2.96	14.53	46.36
6	20.45	4.99	3054.	7.80	13.13	28.45	.00	4.35	10.16	35.38	.79	.03	2.35	11.52	36.78
7	25.57	5.00	3060.	7.80	13.15	28.49	.00	4.36	10.18	35.45	.79	.03	2.35	11.54	36.85
8	26.91	5.31	3250.	7.78	13.55	29.96	.00	4.63	10.81	37.65	.84	.03	2.50	12.26	39.14
9	28.05	5.28	3232.	7.78	13.51	29.82	.00	4.60	10.75	37.44	.83	.03	2.48	12.19	38.91
10	26.26	5.88	3599.	7.73	14.26	32.57	.00	5.12	11.98	41.69	.93	.03	2.77	13.58	43.34
11	28.31	4.70	2877.	7.83	12.75	27.04	.00	4.10	9.57	33.32	.74	.03	2.21	10.85	34.64
12	24.96	5.07	3103.	7.80	13.24	28.83	.00	4.42	10.33	35.95	.80	.03	2.38	11.71	37.37
1985	272.81	5.50	3368.	7.76	13.79	30.86	.00	4.79	11.21	39.02	.87	.03	2.59	12.71	40.56

LOCATION : ES01 UPPER SERW P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	18.09	1.24	809.	7.61	3.67	7.37	.00	3.08	2.82	6.31	.40	.02	2.48	3.35	6.75
2	12.85	1.37	918.	7.56	4.06	8.47	.00	3.44	3.11	7.35	.44	.02	2.74	3.69	7.90
3	22.49	.97	593.	7.71	2.87	5.18	.00	2.34	2.20	4.32	.31	.02	1.94	2.63	4.58
4	18.29	1.06	663.	7.67	3.14	5.89	.00	2.58	2.41	4.95	.34	.02	2.12	2.88	5.27
5	15.60	1.53	1057.	7.51	4.54	9.85	.00	3.89	3.48	8.72	.50	.02	3.06	4.10	9.40
6	20.83	.76	437.	7.82	2.24	3.57	.00	1.78	1.73	2.97	.25	.01	1.52	2.06	3.12
7	25.77	.78	451.	7.81	2.30	3.72	.00	1.83	1.77	3.09	.25	.01	1.56	2.12	3.25
8	27.87	.76	437.	7.82	2.24	3.57	.00	1.78	1.73	2.97	.25	.01	1.52	2.06	3.12
9	25.38	.76	437.	7.82	2.24	3.57	.00	1.78	1.73	2.97	.25	.01	1.52	2.06	3.12
10	21.42	.75	430.	7.82	2.21	3.50	.00	1.75	1.70	2.91	.24	.01	1.50	2.03	3.06
11	15.92	.84	495.	7.78	2.48	4.17	.00	1.99	1.91	3.46	.27	.02	1.68	2.28	3.65
12	19.42	.81	473.	7.79	2.39	3.95	.00	1.91	1.84	3.27	.26	.01	1.62	2.20	3.45
1985	243.93	.93	568.	7.73	2.82	4.98	.00	2.24	2.11	4.15	.30	.02	1.86	2.52	4.41

LOCATION : ES02 LOWER SERW P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	37.94	3.18	2479.	7.33	10.08	24.36	.00	5.47	7.06	25.24	.78	.02	4.18	15.97	18.38
2	27.07	1.50	911.	7.66	4.77	8.93	.00	2.58	3.33	8.20	.37	.02	1.97	4.22	8.27
3	44.42	2.06	1384.	7.52	6.54	13.83	.00	3.54	4.58	13.18	.50	.02	2.71	7.44	11.64
4	39.98	1.59	983.	7.64	5.05	9.70	.00	2.73	3.53	8.95	.39	.02	2.09	4.68	8.82
5	46.76	1.36	802.	7.70	4.33	7.77	.00	2.34	3.02	7.08	.33	.01	1.78	3.54	7.43
6	64.93	1.48	895.	7.67	4.71	8.77	.00	2.54	3.29	8.04	.36	.02	1.94	4.12	8.15
7	75.99	1.50	911.	7.66	4.77	8.93	.00	2.58	3.33	8.20	.37	.02	1.97	4.22	8.27
8	77.02	1.53	935.	7.65	4.86	9.19	.00	2.63	3.40	8.45	.37	.02	2.01	4.37	8.45
9	70.95	1.43	856.	7.68	4.55	8.35	.00	2.46	3.18	7.63	.35	.01	1.88	3.87	7.85
10	48.98	1.41	841.	7.69	4.48	8.18	.00	2.42	3.13	7.48	.34	.01	1.85	3.78	7.73
11	46.96	1.28	741.	7.73	4.07	7.11	.00	2.20	2.84	6.47	.31	.01	1.68	3.18	6.95
12	44.30	1.60	991.	7.63	5.09	9.79	.00	2.75	3.55	9.03	.39	.02	2.10	4.74	8.89
1985	625.30	1.61	1019.	7.63	5.26	10.14	.00	2.77	3.59	9.37	.39	.02	2.12	5.03	8.96

LOCATION : EI01 B. FAQUS CANAL 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.95	667.	7.48	2.50	5.14	.00	2.52	2.79	4.07	.41	.01	2.84	4.25	2.70
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	1.01	722.	7.45	2.66	5.61	.00	2.68	2.99	4.49	.44	.01	3.02	4.71	2.86
4	-	.61	376.	7.67	1.60	2.68	.00	1.62	1.62	2.03	.27	.01	1.82	1.91	1.80
5	-	.63	392.	7.66	1.65	2.81	.00	1.67	1.69	2.14	.27	.01	1.88	2.04	1.85
6	-	.60	368.	7.68	1.57	2.61	.00	1.59	1.59	1.98	.26	.01	1.79	1.85	1.77
7	-	.50	290.	7.76	1.31	1.95	.00	1.33	1.25	1.49	.22	.01	1.49	1.27	1.50
8	-	.66	417.	7.64	1.73	3.02	.00	1.75	1.79	2.30	.29	.01	1.97	2.22	1.93
9	-	.68	433.	7.63	1.78	3.16	.00	1.81	1.86	2.41	.30	.01	2.03	2.35	1.98
10	-	.58	352.	7.69	1.52	2.48	.00	1.54	1.52	1.88	.25	.01	1.73	1.73	1.72
11	-	.74	483.	7.59	1.94	3.58	.00	1.97	2.07	2.75	.32	.01	2.21	2.75	2.14
12	-	.73	475.	7.59	1.91	3.51	.00	1.94	2.03	2.70	.32	.01	2.18	2.68	2.12
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EI02 ISMAILIA CANAL 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 10 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.41	258.	8.01	.82	1.17	.00	1.29	1.31	.93	.26	.02	1.27	1.42	1.08
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	.68	602.	7.79	2.72	4.99	.00	2.14	2.18	3.99	.43	.02	2.12	4.81	1.79
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	.41	258.	8.01	.82	1.17	.00	1.29	1.31	.93	.26	.02	1.27	1.42	1.08
6	-	.39	233.	8.03	.63	.88	.00	1.23	1.25	.71	.25	.02	1.21	1.17	1.02
7	-	.38	220.	8.04	.54	.74	.00	1.20	1.22	.59	.24	.02	1.18	1.05	1.00
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	.46	322.	7.96	1.24	1.89	.00	1.45	1.47	1.50	.29	.02	1.43	2.05	1.21
11	-	.47	335.	7.95	1.32	2.03	.00	1.48	1.50	1.61	.30	.02	1.46	2.18	1.24
12	-	.41	258.	8.01	.82	1.17	.00	1.29	1.31	.93	.26	.02	1.27	1.42	1.08
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EI03 B. MOIIS bef.mix 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.51	346.	7.95	1.21	2.02	.00	1.73	1.48	1.53	.34	.02	1.78	1.57	1.70
2	-	.42	287.	8.03	1.09	1.64	.00	1.42	1.22	1.26	.28	.02	1.46	1.44	1.26
3	-	.41	280.	8.04	1.08	1.60	.00	1.39	1.19	1.23	.28	.02	1.43	1.42	1.21
4	-	.47	320.	7.99	1.16	1.85	.00	1.59	1.36	1.41	.32	.02	1.64	1.52	1.50
5	-	.43	293.	8.02	1.11	1.68	.00	1.46	1.25	1.29	.29	.02	1.50	1.45	1.30
6	-	.36	247.	8.10	1.01	1.37	.00	1.22	1.04	1.08	.24	.02	1.25	1.32	.99
7	-	.44	300.	8.01	1.12	1.73	.00	1.49	1.27	1.32	.30	.02	1.53	1.47	1.35
8	-	.35	240.	8.11	1.00	1.33	.00	1.19	1.01	1.05	.24	.02	1.22	1.30	.95
9	-	.41	280.	8.04	1.08	1.60	.00	1.39	1.19	1.23	.28	.02	1.43	1.42	1.21
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	.44	300.	8.01	1.12	1.73	.00	1.49	1.27	1.32	.30	.02	1.53	1.47	1.35
12	-	.44	300.	8.01	1.12	1.73	.00	1.49	1.27	1.32	.30	.02	1.53	1.47	1.35
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EI04 B. MOIIS aft.mix 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	.89	542.	7.84	2.43	4.32	.00	2.30	2.13	3.61	.28	.02	1.84	2.72	3.75
3	-	.98	637.	7.79	2.91	5.39	.00	2.54	2.35	4.54	.31	.02	2.03	3.56	4.13
4	-	1.21	922.	7.70	4.33	8.69	.00	3.13	2.90	7.51	.38	.02	2.50	6.30	5.10
5	-	.86	513.	7.85	2.28	3.99	.00	2.22	2.06	3.33	.27	.02	1.78	2.47	3.62
6	-	.83	484.	7.87	2.13	3.67	.00	2.15	1.99	3.06	.26	.02	1.72	2.23	3.50
7	-	.69	362.	7.95	1.50	2.36	.00	1.78	1.65	1.97	.22	.02	1.43	1.28	2.91
8	-	.77	429.	7.90	1.85	3.07	.00	1.99	1.84	2.56	.24	.02	1.59	1.78	3.25
9	-	1.06	729.	7.76	3.37	6.45	.00	2.74	2.54	5.48	.34	.02	2.19	4.41	4.47
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	.84	493.	7.86	2.18	3.77	.00	2.17	2.01	3.15	.27	.02	1.74	2.30	3.54
12	-	1.11	791.	7.74	3.68	7.16	.00	2.87	2.66	6.11	.35	.02	2.30	5.00	4.66
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EI05 B. BUKHAYAR/Gamaleva 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.46	309.	7.77	1.17	1.87	.00	1.51	1.32	1.39	.29	.01	1.71	1.34	1.43
2	-	.44	296.	7.79	1.14	1.78	.00	1.44	1.26	1.33	.27	.01	1.64	1.28	1.37
3	-	.41	276.	7.82	1.10	1.65	.00	1.35	1.17	1.23	.25	.01	1.53	1.20	1.27
4	-	.45	303.	7.78	1.15	1.83	.00	1.48	1.29	1.36	.28	.01	1.68	1.31	1.40
5	-	.46	309.	7.77	1.17	1.87	.00	1.51	1.32	1.39	.29	.01	1.71	1.34	1.43
6	-	.36	242.	7.88	1.03	1.42	.00	1.18	1.03	1.08	.22	.01	1.34	1.05	1.12
7	-	.40	269.	7.83	1.09	1.61	.00	1.31	1.14	1.20	.25	.01	1.49	1.17	1.24
8	-	.38	255.	7.85	1.06	1.51	.00	1.25	1.09	1.14	.24	.01	1.41	1.11	1.18
9	-	.45	303.	7.78	1.15	1.83	.00	1.48	1.29	1.36	.28	.01	1.68	1.31	1.40
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	.47	316.	7.76	1.18	1.91	.00	1.54	1.34	1.42	.29	.01	1.75	1.37	1.46
12	-	.46	309.	7.77	1.17	1.87	.00	1.51	1.32	1.39	.29	.01	1.71	1.34	1.43
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : EI06 FARASQUR DAM 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.62	403.	7.94	1.81	2.99	.00	1.77	1.62	2.35	.31	.02	1.71	1.91	2.41
2	-	.64	415.	7.93	1.83	3.09	.00	1.83	1.67	2.43	.32	.02	1.76	1.87	2.59
3	-	.64	415.	7.93	1.83	3.09	.00	1.83	1.67	2.43	.32	.02	1.76	1.87	2.59
4	-	.62	403.	7.94	1.81	2.99	.00	1.77	1.62	2.35	.31	.02	1.71	1.91	2.41
5	-	.59	385.	7.96	1.76	2.84	.00	1.69	1.54	2.24	.29	.02	1.62	1.96	2.15
6	-	.50	331.	8.03	1.62	2.37	.00	1.43	1.30	1.90	.25	.02	1.37	2.01	1.47
7	-	.52	343.	8.02	1.65	2.48	.00	1.49	1.35	1.97	.26	.02	1.43	2.01	1.61
8	-	.53	349.	8.01	1.67	2.53	.00	1.52	1.38	2.01	.26	.02	1.46	2.01	1.68
9	-	.57	373.	7.98	1.73	2.74	.00	1.63	1.48	2.16	.28	.02	1.57	1.99	1.98
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	.59	385.	7.96	1.76	2.84	.00	1.69	1.54	2.24	.29	.02	1.62	1.96	2.15
12	-	.59	385.	7.96	1.76	2.84	.00	1.69	1.54	2.24	.29	.02	1.62	1.96	2.15
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4. DISCHARGE AND CHEMICAL COMPOSITION MIDDLE DELTA DURING 1985

LOCATION : M101 UPPER P.S. NO 1 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	2.69	.84	529.	8.02	4.90	7.15	.00	.97	1.34	5.26	.23	.03	1.76	3.33	2.68
2	1.01	.58	347.	8.19	3.76	4.20	.00	.67	.92	3.35	.16	.03	1.21	2.20	1.66
3	4.38	1.02	659.	7.94	5.63	9.17	.00	1.18	1.63	6.66	.28	.03	2.14	4.13	3.44
4	3.48	1.13	740.	7.90	6.05	10.39	.00	1.30	1.80	7.54	.31	.03	2.38	4.63	3.92
5	2.38	1.04	674.	7.93	5.70	9.39	.00	1.20	1.66	6.82	.28	.03	2.19	4.22	3.53
6	6.15	1.19	785.	7.87	6.28	11.05	.00	1.37	1.90	8.03	.33	.03	2.50	4.90	4.19
7	13.02	2.16	1549.	7.61	9.62	21.38	.00	2.49	3.44	16.58	.59	.03	4.55	9.47	9.04
8	5.16	1.22	808.	7.86	6.40	11.38	.00	1.41	1.94	8.28	.33	.03	2.57	5.04	4.33
9	7.93	1.36	914.	7.81	6.91	12.91	.00	1.57	2.17	9.45	.37	.03	2.86	5.68	4.98
10	5.35	1.58	1084.	7.75	7.69	15.29	.00	1.82	2.52	11.33	.43	.03	3.33	6.71	6.04
11	4.18	1.07	696.	7.92	5.82	9.73	.00	1.23	1.71	7.06	.29	.03	2.25	4.36	3.66
12	7.70	1.60	1100.	7.74	7.76	15.50	.00	1.84	2.55	11.51	.44	.03	3.37	6.80	6.14
1985	63.43	1.44	984.	7.79	7.29	13.95	.00	1.66	2.30	10.26	.40	.03	3.04	6.09	5.46

LOCATION : M102 BRIDGE DRAIN NO 1 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	4.15	1.48	999.	8.33	8.14	15.51	.00	1.33	2.17	10.77	.37	.12	3.27	6.61	4.64
2	4.11	1.70	1187.	8.27	8.95	18.08	.00	1.53	2.58	12.82	.43	.12	3.77	8.18	5.28
3	10.10	1.03	638.	8.49	6.36	10.06	.08	.92	1.37	6.81	.26	.11	2.27	3.70	3.29
4	10.20	1.12	707.	8.45	6.74	11.17	.05	1.01	1.52	7.57	.28	.11	2.47	4.25	3.56
5	11.10	.93	562.	8.53	5.93	8.81	.11	.83	1.20	5.99	.23	.10	2.04	3.13	2.99
6	7.00	1.01	622.	8.50	6.28	9.81	.08	.91	1.34	6.65	.25	.10	2.22	3.59	3.23
7	7.00	.94	569.	8.53	5.98	8.94	.10	.84	1.22	6.07	.23	.10	2.06	3.19	3.02
8	7.00	1.08	676.	8.47	6.57	10.68	.06	.97	1.45	7.23	.27	.11	2.38	4.00	3.44
9	7.00	1.34	883.	8.38	7.61	13.84	.00	1.20	1.91	9.50	.34	.11	2.96	5.65	4.22
10	7.00	1.59	1092.	8.30	8.55	16.80	.00	1.43	2.37	11.78	.40	.12	3.52	7.38	4.96
11	7.32	1.60	1101.	8.30	8.59	16.92	.00	1.44	2.39	11.88	.40	.12	3.54	7.46	4.99
12	8.55	1.50	1016.	8.33	8.22	15.74	.00	1.35	2.20	10.95	.38	.12	3.32	6.75	4.69
1985	90.53	1.23	801.	8.41	7.23	12.61	.00	1.11	1.73	8.61	.31	.11	2.72	5.03	3.89

LOCATION : M103 P.S. LOWER No 1 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	62.64	2.24	1345.	7.50	8.44	15.53	.00	2.26	3.91	14.82	.48	.01	1.95	6.55	12.95
2	39.35	6.16	3844.	7.06	15.03	39.11	.00	6.21	12.40	45.85	.87	.01	5.38	2.31	57.62
3	61.19	3.60	2204.	7.29	11.07	24.56	.00	3.63	6.71	25.17	.62	.01	3.14	6.90	26.08
4	72.93	2.82	1709.	7.40	9.63	19.53	.00	2.84	5.08	19.16	.54	.01	2.46	6.97	18.19
5	63.63	2.70	1634.	7.42	9.39	18.73	.00	2.72	4.83	18.26	.53	.01	2.36	6.92	17.05
6	73.90	2.18	1307.	7.51	8.31	15.10	.00	2.20	3.79	14.38	.47	.01	1.90	6.49	12.44
7	101.86	2.10	1257.	7.53	8.14	14.52	.00	2.12	3.63	13.79	.47	.01	1.83	6.39	11.77
8	78.41	2.98	1810.	7.38	9.94	20.60	.00	3.00	5.41	20.38	.55	.01	2.60	7.01	19.73
9	74.32	2.81	1703.	7.40	9.61	19.47	.00	2.83	5.06	19.09	.54	.01	2.45	6.96	18.09
10	69.47	2.00	1195.	7.55	7.91	13.79	.00	2.02	3.43	13.06	.46	.01	1.74	6.26	10.95
11	65.99	3.37	2058.	7.32	10.66	23.12	.00	3.40	6.23	23.38	.59	.01	2.94	6.99	23.66
12	64.02	3.93	2414.	7.26	11.64	26.59	.00	3.96	7.42	27.76	.65	.01	3.43	6.67	29.68
1985	827.71	2.91	1771.	7.39	9.84	20.24	.00	2.94	5.31	19.99	.55	.01	2.54	6.51	19.71

LOCATION : M104 P.S. NO 2 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	29.99	3.03	1844.	7.36	9.54	20.16	.00	3.39	5.75	20.38	.48	.01	2.67	6.96	20.36
2	17.93	5.28	3557.	7.12	14.82	37.02	.00	5.90	10.02	41.82	.84	.01	4.65	10.22	43.70
3	27.79	2.41	1408.	7.46	7.95	15.44	.00	2.69	4.57	15.16	.38	.01	2.12	5.82	14.86
4	26.47	2.85	1715.	7.39	9.08	18.79	.00	3.19	5.41	18.83	.45	.01	2.51	6.64	18.72
5	22.69	2.75	1645.	7.40	8.83	18.03	.00	3.07	5.22	17.98	.44	.01	2.42	6.46	17.82
6	38.14	2.41	1408.	7.46	7.95	15.44	.00	2.69	4.57	15.16	.38	.01	2.12	5.82	14.86
7	49.41	2.36	1374.	7.47	7.82	15.05	.00	2.64	4.48	14.75	.38	.01	2.08	5.72	14.44
8	39.92	2.71	1617.	7.41	8.73	17.73	.00	3.03	5.14	17.64	.43	.01	2.39	6.39	17.46
9	36.45	2.76	1652.	7.40	8.86	18.11	.00	3.09	5.24	18.06	.44	.01	2.43	6.48	17.91
10	26.87	2.74	1638.	7.40	8.80	17.96	.00	3.06	5.20	17.90	.44	.01	2.41	6.44	17.73
11	23.36	3.35	2075.	7.32	10.33	22.59	.00	3.75	6.36	23.21	.53	.01	2.95	7.51	23.38
12	33.81	2.84	1708.	7.39	9.06	18.72	.00	3.18	5.39	18.74	.45	.01	2.50	6.62	18.63
1985	372.83	2.83	1710.	7.39	9.11	18.79	.00	3.17	5.37	18.82	.45	.01	2.49	6.56	18.75

LOCATION : M111 P.S. NO 11 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	24.74	2.11	1291.	7.73	5.69	12.39	.00	3.57	4.90	11.70	.50	.03	2.93	5.11	12.61
2	18.37	3.95	2392.	7.46	5.99	16.18	.00	7.99	12.13	19.00	.94	.03	5.49	4.05	30.49
3	37.10	1.62	1005.	7.84	5.56	10.74	.00	2.54	3.35	9.54	.39	.03	2.25	4.85	8.69
4	34.79	1.66	1028.	7.83	5.58	10.89	.00	2.62	3.47	9.72	.40	.03	2.30	4.89	8.99
5	44.94	1.61	999.	7.85	5.56	10.70	.00	2.52	3.32	9.50	.38	.03	2.23	4.84	8.61
6	49.64	1.57	975.	7.86	5.55	10.54	.00	2.44	3.20	9.32	.38	.03	2.18	4.81	8.31
7	57.81	1.31	824.	7.94	5.46	9.40	.00	1.93	2.46	8.10	.31	.03	1.81	4.52	6.44
8	63.83	1.48	923.	7.88	5.52	10.17	.00	2.26	2.94	8.90	.35	.03	2.05	4.72	7.65
9	56.62	1.31	824.	7.94	5.46	9.40	.00	1.93	2.46	8.10	.31	.03	1.81	4.52	6.44
10	44.74	1.45	905.	7.89	5.51	10.04	.00	2.20	2.85	8.76	.35	.03	2.01	4.69	7.43
11	35.63	1.30	818.	7.94	5.46	9.35	.00	1.91	2.44	8.05	.31	.03	1.80	4.51	6.37
12	32.00	1.81	1116.	7.80	5.62	11.44	.00	2.93	3.93	10.40	.43	.03	2.51	4.99	10.16
1985	500.21	1.61	1001.	7.85	5.47	10.58	.00	2.56	3.41	9.45	.39	.03	2.24	4.71	8.83

LOCATION : M701 P.S. NO 7 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	22.14	5.02	3104.	7.40	12.32	28.59	.00	6.20	9.64	34.68	.69	.02	3.05	11.66	36.48
2	13.50	10.88	6975.	7.06	17.36	49.70	.00	16.29	23.75	77.69	1.08	.02	6.62	12.26	99.92
3	23.46	3.60	2195.	7.54	10.63	21.84	.00	4.09	6.54	24.52	.60	.02	2.19	9.89	23.66
4	27.94	3.21	1948.	7.59	10.10	19.77	.00	3.54	5.73	21.76	.57	.01	1.95	9.26	20.38
5	24.31	3.38	2056.	7.57	10.34	20.69	.00	3.78	6.08	22.96	.58	.01	2.05	9.54	21.79
6	24.01	3.14	1904.	7.60	10.01	19.39	.00	3.45	5.58	21.26	.56	.01	1.91	9.14	19.80
7	34.85	1.62	962.	7.89	7.46	9.87	.00	1.51	2.58	10.66	.46	.01	.98	5.86	8.36
8	28.10	3.28	1992.	7.58	10.20	20.15	.00	3.64	5.87	22.25	.57	.01	1.99	9.38	20.96
9	33.80	3.85	2354.	7.51	10.95	23.10	.00	4.45	7.08	26.30	.61	.02	2.34	10.26	25.82
10	27.39	4.68	2885.	7.43	11.95	27.06	.00	5.68	8.89	32.23	.67	.02	2.84	11.31	33.30
11	27.03	4.42	2718.	7.45	11.65	25.86	.00	5.29	8.31	30.37	.65	.02	2.68	11.01	30.91
12	30.80	3.82	2335.	7.52	10.92	22.95	.00	4.41	7.01	26.08	.61	.02	2.32	10.22	25.56
1985	317.33	3.89	2389.	7.51	10.93	23.22	.00	4.62	7.27	26.66	.61	.02	2.36	9.78	27.02

LOCATION : MB01 LOWER P.S. NO 8 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	16.73	3.87	2389.	7.69	11.51	23.50	.00	4.30	6.75	27.06	.51	.02	2.10	12.51	23.99
2	10.73	5.96	3683.	7.51	15.08	35.38	.00	5.90	10.69	43.44	.79	.02	3.25	13.40	44.15
3	13.25	5.06	3126.	7.58	13.62	30.41	.00	5.23	8.98	36.31	.67	.02	2.75	13.38	35.03
4	19.18	3.49	2154.	7.74	10.79	21.19	.00	3.98	6.05	24.16	.46	.02	1.90	12.01	20.73
5	17.55	3.38	2085.	7.75	10.57	20.51	.00	3.89	5.84	23.33	.45	.02	1.84	11.84	19.81
6	19.04	5.58	3448.	7.53	14.48	33.31	.00	5.62	9.96	40.41	.74	.02	3.04	13.45	40.22
7	34.95	3.65	2253.	7.72	11.10	22.17	.00	4.12	6.34	25.38	.48	.02	1.98	12.23	22.08
8	26.14	4.42	2730.	7.64	12.51	26.75	.00	4.74	7.77	31.30	.59	.02	2.41	13.04	26.94
9	30.58	4.98	3077.	7.58	13.48	29.96	.00	5.17	8.83	35.68	.66	.02	2.71	13.35	34.25
10	23.29	6.20	3832.	7.49	15.46	36.67	.00	6.08	11.15	45.36	.82	.02	3.38	13.32	46.68
11	19.66	6.94	4289.	7.44	16.58	40.56	.00	6.60	12.57	51.33	.92	.02	3.78	12.87	54.74
12	18.12	5.40	3337.	7.55	14.18	32.31	.00	5.49	9.62	38.99	.71	.02	2.94	13.45	38.40
1985	249.22	4.82	2980.	7.60	13.26	29.16	.00	5.03	8.55	34.55	.64	.02	2.63	12.87	33.24

LOCATION : MG01 EAST MENUFEYA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	12.87	1.25	860.	7.48	3.58	7.63	.00	3.24	2.88	6.26	.34	.02	3.13	5.73	3.83
2	16.69	1.86	1347.	7.31	4.49	10.97	.00	5.41	4.21	9.84	.51	.02	4.67	9.10	6.19
3	9.23	.89	587.	7.63	2.94	5.43	.00	2.09	2.08	4.25	.24	.01	2.23	3.87	2.55
4	6.45	1.24	852.	7.49	3.56	7.57	.00	3.20	2.86	6.20	.34	.02	3.11	5.68	3.80
5	6.02	1.10	745.	7.54	3.32	6.74	.00	2.74	2.55	5.41	.30	.02	2.76	4.95	3.29
6	3.18	.70	448.	7.74	2.56	4.17	.00	1.53	1.66	3.23	.19	.01	1.75	2.94	1.91
7	4.35	1.20	821.	7.50	3.50	7.34	.00	3.07	2.77	5.97	.33	.02	3.01	5.47	3.65
8	6.19	1.34	930.	7.45	3.72	8.15	.00	3.54	3.08	6.77	.37	.02	3.36	6.22	4.17
9	9.13	1.09	737.	7.54	3.31	6.68	.00	2.71	2.53	5.35	.30	.02	2.73	4.89	3.25
10	6.75	1.23	844.	7.49	3.55	7.51	.00	3.17	2.84	6.14	.34	.02	3.08	5.63	3.76
11	10.61	1.27	875.	7.48	3.61	7.75	.00	3.30	2.93	6.37	.35	.02	3.18	5.84	3.91
12	13.88	.85	557.	7.65	2.87	5.17	.00	1.97	2.00	4.03	.23	.01	2.13	3.67	2.41
1985	105.35	1.23	846.	7.49	3.55	7.52	.00	3.20	2.83	6.16	.33	.02	3.08	5.65	3.78

LOCATION : MG02 SEGAAYA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	14.59	2.49	1675.	6.89	5.11	12.88	.00	6.96	5.41	12.71	.62	.01	4.80	9.55	11.34
2	7.30	2.29	1538.	6.93	5.06	12.43	.00	6.13	4.94	11.91	.57	.01	4.43	8.90	10.20
3	12.88	1.40	924.	7.14	4.78	9.62	.00	2.79	2.80	7.99	.35	.01	2.71	5.89	5.32
4	11.06	1.40	924.	7.14	4.78	9.62	.00	2.79	2.80	7.99	.35	.01	2.71	5.89	5.32
5	8.06	1.34	884.	7.16	4.75	9.36	.00	2.61	2.66	7.71	.33	.01	2.59	5.68	5.02
6	16.78	1.19	785.	7.21	4.68	8.68	.00	2.16	2.32	7.00	.30	.01	2.30	5.17	4.29
7	24.50	1.26	831.	7.19	4.72	9.01	.00	2.36	2.48	7.33	.31	.01	2.44	5.41	4.63
8	20.64	1.43	944.	7.13	4.79	9.74	.00	2.89	2.87	8.13	.35	.01	2.77	5.99	5.47
9	25.55	1.23	811.	7.20	4.70	8.87	.00	2.27	2.41	7.19	.31	.01	2.38	5.31	4.49
10	17.70	1.55	1025.	7.10	4.84	10.20	.00	3.29	3.15	8.68	.38	.01	3.00	6.40	6.09
11	18.22	1.42	937.	7.13	4.79	9.70	.00	2.86	2.84	8.08	.35	.01	2.75	5.96	5.42
12	19.80	1.39	917.	7.14	4.77	9.57	.00	2.76	2.77	7.94	.34	.01	2.69	5.86	5.27
1985	197.07	1.47	974.	7.12	4.75	9.82	.00	3.10	2.97	8.28	.36	.01	2.85	6.13	5.74

LOCATION : MG03 MAHALLET RUH P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	6.98	1.45	1026.	7.30	3.66	8.64	.00	3.98	3.67	7.16	.41	.02	4.41	5.44	5.36
2	3.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	5.90	.94	621.	7.49	3.15	5.68	.00	2.24	2.08	4.64	.27	.01	2.01	4.41	2.80
4	5.28	.98	652.	7.47	3.20	5.96	.00	2.38	2.20	4.83	.28	.01	2.20	4.50	2.98
5	5.98	.79	503.	7.57	2.99	4.43	.00	1.73	1.66	3.90	.22	.01	1.31	4.04	2.15
6	5.84	.86	558.	7.53	3.07	5.05	.00	1.97	1.85	4.24	.24	.01	1.64	4.21	2.45
7	7.35	.89	581.	7.51	3.10	5.30	.00	2.07	1.94	4.39	.25	.01	1.78	4.29	2.58
8	6.40	1.14	779.	7.41	3.36	6.98	.00	2.93	2.68	5.63	.32	.01	2.95	4.85	3.74
9	6.72	.94	621.	7.49	3.15	5.68	.00	2.24	2.08	4.64	.27	.01	2.01	4.41	2.80
10	7.74	.85	550.	7.53	3.06	4.97	.00	1.93	1.82	4.19	.24	.01	1.59	4.19	2.41
11	8.68	.98	652.	7.47	3.20	5.96	.00	2.38	2.20	4.83	.28	.01	2.20	4.50	2.98
12	7.90	.89	581.	7.51	3.10	5.30	.00	2.07	1.94	4.39	.25	.01	1.78	4.29	2.58
1985	80.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : MG04 SAMATAY P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	25.69	1.86	1190.	7.12	4.71	10.77	.00	4.51	3.83	9.62	.47	.01	3.65	5.33	9.45
2	14.53	2.04	1300.	7.08	4.79	11.34	.00	5.15	4.21	10.37	.52	.01	4.04	5.34	10.86
3	27.02	1.40	908.	7.24	4.45	9.02	.00	3.00	2.89	7.64	.36	.01	2.65	5.06	6.16
4	19.66	1.43	926.	7.23	4.47	9.15	.00	3.09	2.95	7.77	.36	.01	2.72	5.09	6.36
5	30.68	1.27	828.	7.28	4.37	8.43	.00	2.61	2.62	7.06	.32	.01	2.37	4.91	5.32
6	17.67	1.25	816.	7.29	4.35	8.33	.00	2.55	2.58	6.97	.32	.01	2.33	4.88	5.20
7	33.26	1.15	754.	7.33	4.28	7.83	.00	2.26	2.37	6.51	.29	.01	2.11	4.74	4.58
8	32.83	1.39	902.	7.24	4.45	8.97	.00	2.97	2.87	7.60	.35	.01	2.63	5.05	6.10
9	33.92	1.31	853.	7.27	4.39	8.61	.00	2.73	2.70	7.24	.33	.01	2.46	4.96	5.58
10	25.65	1.29	840.	7.28	4.38	8.52	.00	2.67	2.66	7.15	.33	.01	2.42	4.93	5.45
11	27.56	1.31	853.	7.27	4.39	8.61	.00	2.73	2.70	7.24	.33	.01	2.46	4.96	5.58
12	32.54	1.32	859.	7.27	4.40	8.66	.00	2.76	2.72	7.28	.34	.01	2.48	4.97	5.64
1985	320.91	1.39	899.	7.24	4.43	8.93	.00	2.98	2.86	7.56	.35	.01	2.62	5.00	6.12

LOCATION : MG05 P.S. NO 5 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	12.14	2.29	1492.	7.27	7.18	16.35	.00	4.26	3.99	14.59	.43	.01	3.84	6.66	12.75
2	9.39	2.43	1585.	7.25	7.34	17.07	.00	4.64	4.24	15.47	.45	.01	4.07	6.75	13.96
3	12.69	1.93	1253.	7.35	6.74	14.38	.00	3.32	3.37	12.32	.36	.01	3.23	6.31	9.82
4	15.31	1.67	1081.	7.41	6.38	12.81	.00	2.70	2.91	10.68	.31	.01	2.80	5.93	7.87
5	10.59	1.71	1108.	7.40	6.44	13.06	.00	2.79	2.98	10.93	.32	.01	2.86	5.99	8.16
6	13.68	1.66	1075.	7.41	6.36	12.75	.00	2.67	2.89	10.62	.31	.01	2.78	5.91	7.80
7	25.45	1.66	1075.	7.41	6.36	12.75	.00	2.67	2.89	10.62	.31	.01	2.78	5.91	7.80
8	17.95	2.03	1319.	7.33	6.87	14.95	.00	3.58	3.54	12.95	.38	.01	3.40	6.43	10.61
9	23.26	1.68	1088.	7.41	6.39	12.88	.00	2.72	2.93	10.75	.31	.01	2.81	5.94	7.94
10	19.59	1.61	1042.	7.43	6.29	12.43	.00	2.56	2.81	10.30	.30	.01	2.70	5.82	7.44
11	14.10	1.75	1134.	7.39	6.49	13.31	.00	2.89	3.05	11.19	.33	.01	2.93	6.06	8.45
12	20.26	1.53	989.	7.45	6.17	11.91	.00	2.38	2.67	9.80	.29	.01	2.56	5.67	6.88
1985	194.41	1.78	1156.	7.38	6.53	13.49	.00	2.98	3.11	11.39	.33	.01	2.98	6.06	8.75

LOCATION : MG06 GHARBIA BR. NO 6 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	53.44	1.70	1108.	7.37	5.28	11.10	.00	3.53	3.33	9.78	.40	.01	2.88	6.25	7.90
2	27.47	3.20	2166.	7.10	6.90	17.95	.00	7.03	7.68	18.70	.76	.01	5.42	9.82	18.91
3	39.65	1.46	941.	7.44	4.96	9.77	.00	2.97	2.73	8.36	.34	.01	2.47	5.52	6.41
4	44.60	1.47	948.	7.44	4.97	9.83	.00	2.99	2.75	8.42	.35	.01	2.49	5.55	6.47
5	49.60	1.26	804.	7.50	4.67	8.58	.00	2.51	2.25	7.19	.30	.01	2.13	4.87	5.23
6	54.59	1.30	831.	7.49	4.73	8.82	.00	2.60	2.34	7.43	.31	.01	2.20	5.00	5.46
7	94.55	1.40	900.	7.46	4.87	9.42	.00	2.83	2.58	8.01	.33	.01	2.37	5.33	6.05
8	83.10	1.50	969.	7.43	5.01	10.00	.00	3.06	2.83	8.60	.35	.01	2.54	5.65	6.65
9	95.41	1.60	1038.	7.40	5.15	10.56	.00	3.30	3.08	9.19	.38	.01	2.71	5.96	7.27
10	96.47	1.60	1038.	7.40	5.15	10.56	.00	3.30	3.08	9.19	.38	.01	2.71	5.96	7.27
11	83.81	1.70	1108.	7.37	5.28	11.10	.00	3.53	3.33	9.78	.40	.01	2.88	6.25	7.90
12	108.26	1.30	831.	7.49	4.73	8.82	.00	2.60	2.34	7.43	.31	.01	2.20	5.00	5.46
1985	830.95	1.54	1000.	7.41	5.06	10.24	.00	3.17	2.96	8.86	.36	.01	2.61	5.74	7.00

LOCATION : MG07 P.S. NO 6 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	11.01	6.70	4356.	7.06	11.58	31.33	.00	9.38	18.65	43.36	1.05	.01	5.11	16.40	50.91
2	4.63	9.85	6783.	6.89	12.63	37.72	.00	13.76	36.11	63.09	1.54	.02	7.52	24.57	82.39
3	10.17	4.45	2769.	7.23	10.46	24.87	.00	6.25	9.25	29.12	.70	.01	3.39	11.37	30.54
4	9.57	2.71	1630.	7.45	9.12	17.68	.00	3.82	3.95	17.97	.42	.01	2.07	7.66	16.43
5	7.43	4.46	2776.	7.23	10.47	24.91	.00	6.26	9.28	29.19	.70	.01	3.40	11.39	30.62
6	9.23	3.00	1814.	7.40	9.39	19.09	.00	4.22	4.70	19.84	.47	.01	2.29	8.28	18.66
7	18.99	2.62	1573.	7.46	9.03	17.22	.00	3.69	3.73	17.39	.41	.01	2.00	7.46	15.75
8	16.62	2.61	1567.	7.47	9.02	17.17	.00	3.68	3.70	17.33	.41	.01	1.99	7.44	15.68
9	17.48	2.70	1624.	7.45	9.11	17.63	.00	3.80	3.93	17.91	.42	.01	2.06	7.63	16.36
10	16.42	2.94	1776.	7.41	9.34	18.80	.00	4.14	4.54	19.46	.46	.01	2.24	8.15	18.19
11	10.59	3.51	2144.	7.34	9.82	21.33	.00	4.93	6.16	23.12	.55	.01	2.68	9.37	22.70
12	13.01	2.73	1643.	7.45	9.14	17.78	.00	3.84	4.00	18.10	.43	.01	2.08	7.70	16.58
1985	145.15	3.53	2191.	7.33	9.51	20.92	.00	4.96	6.95	23.21	.55	.01	2.69	9.48	23.49

LOCATION : MG08 HAMUL P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	13.30	2.10	1399.	7.20	6.49	14.40	.00	3.77	4.41	13.13	.49	.01	3.35	7.30	11.14
2	0	.97	559.	7.54	3.42	5.49	.00	1.74	2.04	4.70	.22	.01	1.54	2.77	4.39
3	21.59	1.89	1233.	7.25	5.95	12.74	.00	3.39	3.97	11.41	.44	.01	3.01	6.38	9.81
4	31.17	1.67	1064.	7.30	5.37	10.99	.00	3.00	3.51	9.68	.39	.01	2.66	5.46	8.45
5	33.60	1.94	1273.	7.24	6.08	13.13	.00	3.48	4.07	11.82	.45	.01	3.09	6.60	10.12
6	32.67	1.63	1034.	7.31	5.26	10.68	.00	2.92	3.42	9.38	.38	.01	2.60	5.29	8.20
7	35.98	1.55	974.	7.33	5.05	10.04	.00	2.78	3.25	8.77	.36	.01	2.47	4.97	7.72
8	35.97	1.44	892.	7.37	4.75	9.17	.00	2.58	3.02	7.95	.33	.01	2.29	4.53	7.06
9	24.00	1.37	841.	7.39	4.56	8.62	.00	2.46	2.88	7.44	.32	.01	2.18	4.25	6.65
10	13.18	1.50	936.	7.35	4.91	9.65	.00	2.69	3.15	8.40	.35	.01	2.39	4.77	7.42
11	12.08	1.51	944.	7.35	4.94	9.73	.00	2.71	3.17	8.47	.35	.01	2.40	4.81	7.48
12	3.85	1.23	740.	7.43	4.17	7.52	.00	2.21	2.58	6.45	.29	.01	1.96	3.72	5.84
1985	257.39	1.64	991.	7.33	5.13	10.25	.00	2.81	3.29	8.97	.36	.01	2.50	5.07	7.86

LOCATION : MG09 P.S. NO 4 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	23.79	1.99	1244.	7.39	6.25	13.13	.00	3.37	4.06	12.06	.42	.01	2.76	4.62	12.51
2	14.85	2.38	1481.	7.32	6.96	15.56	.00	4.03	4.86	14.68	.50	.01	3.31	3.77	16.98
3	12.62	1.68	1053.	7.47	5.65	11.11	.00	2.84	3.43	10.00	.35	.01	2.33	4.92	9.36
4	18.38	1.75	1096.	7.45	5.79	11.57	.00	2.96	3.57	10.46	.37	.01	2.43	4.88	10.04
5	14.71	1.74	1090.	7.45	5.77	11.51	.00	2.95	3.55	10.40	.36	.01	2.42	4.89	9.94
6	30.84	1.52	953.	7.51	5.32	10.03	.00	2.57	3.10	8.96	.32	.01	2.11	4.94	7.89
7	32.83	1.24	778.	7.60	4.70	8.08	.00	2.10	2.53	7.16	.26	.01	1.72	4.74	5.57
8	32.38	1.43	897.	7.54	5.13	9.41	.00	2.42	2.92	8.38	.30	.01	1.99	4.91	7.11
9	31.77	1.50	941.	7.52	5.28	9.90	.00	2.54	3.06	8.83	.31	.01	2.08	4.94	7.72
10	30.71	1.50	941.	7.52	5.28	9.90	.00	2.54	3.06	8.83	.31	.01	2.08	4.94	7.72
11	21.05	1.58	991.	7.49	5.44	10.44	.00	2.67	3.23	9.35	.33	.01	2.19	4.94	8.43
12	22.44	1.52	953.	7.51	5.32	10.03	.00	2.57	3.10	8.96	.32	.01	2.11	4.94	7.89
1985	286.37	1.59	999.	7.49	5.48	10.55	.00	2.70	3.26	9.46	.33	.01	2.21	4.82	8.70

LOCATION : MG10 P.S. NO 3 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	16.65	4.23	2716.	7.27	9.28	22.99	.00	7.85	9.07	27.00	.74	.02	3.91	9.31	31.43
2	10.59	5.01	3260.	7.20	10.03	26.06	.00	9.93	10.83	32.30	.87	.02	4.63	9.88	39.41
3	19.03	3.35	2099.	7.37	8.41	19.28	.00	5.50	7.09	21.09	.58	.01	3.09	8.15	23.00
4	17.86	2.99	1846.	7.42	8.04	17.67	.00	4.53	6.28	18.70	.52	.01	2.76	7.50	19.76
5	16.44	3.14	1951.	7.40	8.20	18.35	.00	4.93	6.61	19.70	.55	.01	2.90	7.78	21.10
6	27.65	2.40	1430.	7.52	7.45	14.88	.00	2.96	4.95	14.82	.42	.01	2.22	6.18	14.73
7	38.68	2.00	1148.	7.59	7.09	12.84	.00	1.89	4.04	12.22	.35	.01	1.85	5.10	11.54
8	29.54	2.37	1409.	7.52	7.42	14.73	.00	2.88	4.88	14.62	.41	.01	2.19	6.11	14.48
9	28.81	2.34	1388.	7.53	7.40	14.58	.00	2.80	4.81	14.42	.41	.01	2.16	6.03	14.24
10	22.28	2.27	1339.	7.54	7.33	14.23	.00	2.61	4.65	13.97	.39	.01	2.10	5.85	13.67
11	16.24	3.09	1916.	7.41	8.15	18.12	.00	4.80	6.50	19.36	.54	.01	2.85	7.69	20.65
12	14.99	2.45	1466.	7.51	7.50	15.13	.00	3.09	5.06	15.14	.43	.01	2.26	6.31	15.14
1985	258.76	2.75	1674.	7.46	7.81	16.58	.00	3.89	5.73	17.13	.48	.01	2.54	6.76	17.92

LOCATION : MG11 GHARBIA BR. NO 7 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	38.70	2.13	1349.	7.27	6.79	14.17	.00	3.62	4.02	13.27	.37	.01	2.68	6.80	11.80
2	26.90	4.72	2966.	6.93	9.23	24.88	.00	9.32	9.98	28.68	.60	.01	5.95	8.17	34.45
3	44.19	1.97	1249.	7.31	6.59	13.31	.00	3.30	3.68	12.31	.36	.01	2.48	6.53	10.62
4	44.00	1.86	1180.	7.33	6.44	12.70	.00	3.08	3.44	11.64	.34	.01	2.34	6.33	9.83
5	43.55	1.90	1205.	7.32	6.50	12.93	.00	3.16	3.53	11.88	.35	.01	2.39	6.41	10.11
6	69.50	1.70	1079.	7.37	6.22	11.78	.00	2.77	3.11	10.67	.33	.01	2.14	6.02	8.71
7	115.32	1.60	1017.	7.40	6.08	11.18	.00	2.58	2.90	10.06	.31	.01	2.01	5.81	8.02
8	91.94	1.40	891.	7.45	5.77	9.92	.00	2.20	2.49	8.84	.29	.01	1.76	5.35	6.70
9	106.31	1.70	1079.	7.37	6.22	11.78	.00	2.77	3.11	10.67	.33	.01	2.14	6.02	8.71
10	108.01	1.70	1079.	7.37	6.22	11.78	.00	2.77	3.11	10.67	.33	.01	2.14	6.02	8.71
11	63.79	1.80	1142.	7.34	6.36	12.36	.00	2.97	3.32	11.28	.34	.01	2.27	6.22	9.40
12	81.41	1.70	1079.	7.37	6.22	11.78	.00	2.77	3.11	10.67	.33	.01	2.14	6.02	8.71
1985	833.62	1.81	1149.	7.34	6.35	12.39	.00	3.01	3.36	11.33	.34	.01	2.28	6.10	9.65

LOCATION : MG12 HAFIR SH. EL DIN P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	33.64	9.90	6116.	7.57	21.51	50.11	.00	7.14	17.84	75.99	1.25	.03	2.69	21.58	77.92
2	13.17	14.17	8949.	7.41	24.11	62.67	.00	12.29	27.59	107.68	1.79	.03	3.85	34.54	110.92
3	22.32	9.37	5771.	7.59	21.13	48.32	.00	6.57	16.68	72.03	1.18	.03	2.54	20.09	73.81
4	21.69	8.78	5388.	7.62	20.69	46.24	.00	5.95	15.41	67.62	1.11	.02	2.38	18.46	69.23
5	23.47	8.53	5227.	7.63	20.50	45.33	.00	5.70	14.88	65.75	1.08	.02	2.32	17.78	67.29
6	28.71	7.88	4809.	7.67	19.98	42.89	.00	5.05	13.51	60.87	1.00	.02	2.14	16.04	62.23
7	40.39	7.43	4521.	7.69	19.61	41.12	.00	4.62	12.58	57.49	.94	.02	2.02	14.86	58.73
8	36.50	8.20	5014.	7.65	20.24	44.11	.00	5.37	14.18	63.28	1.04	.02	2.23	16.89	64.72
9	39.72	7.91	4828.	7.66	20.01	43.01	.00	5.08	13.57	61.10	1.00	.02	2.15	16.12	62.47
10	31.76	9.74	6011.	7.57	21.39	49.59	.00	6.96	17.49	74.80	1.23	.03	2.65	21.13	76.68
11	29.15	10.13	6266.	7.56	21.66	50.87	.00	7.39	18.34	77.71	1.28	.03	2.75	22.24	79.70
12	34.56	10.14	6273.	7.56	21.67	50.91	.00	7.40	18.36	77.78	1.28	.03	2.75	22.27	79.78
1985	355.08	9.05	5570.	7.61	20.84	47.12	.00	6.29	16.04	69.64	1.14	.03	2.46	19.30	71.33

LOCATION : MG13 GHARBIA OUTFALL 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	69.00	5.73	3551.	6.84	14.64	35.42	.00	6.20	9.91	41.54	.87	.01	3.88	11.67	42.95
2	64.60	5.06	3097.	6.89	13.40	31.31	.00	5.47	8.83	35.82	.79	.01	3.42	10.70	36.78
3	66.40	2.37	1348.	7.22	7.81	13.89	.00	2.56	4.35	14.53	.46	.00	1.60	6.01	14.28
4	63.60	1.88	1048.	7.32	6.63	10.52	.00	2.03	3.51	11.03	.39	.00	1.27	4.98	10.70
5	62.90	4.78	2909.	6.92	12.87	29.57	.00	5.17	8.37	33.48	.76	.01	3.23	10.28	34.26
6	86.05	4.39	2649.	6.95	12.11	27.12	.00	4.75	7.73	30.25	.72	.01	2.97	9.66	30.81
7	116.26	1.64	903.	7.38	6.01	8.84	.00	1.77	3.09	9.37	.35	.00	1.11	4.45	9.02
8	106.44	3.42	2014.	7.06	10.14	20.89	.00	3.70	6.13	22.47	.60	.01	2.31	8.01	22.56
9	111.34	1.87	1042.	7.32	6.60	10.45	.00	2.02	3.49	10.96	.39	.00	1.26	4.96	10.63
10	114.27	9.67	6336.	6.61	21.23	58.25	.00	10.45	16.15	77.43	1.26	.01	6.54	16.24	82.49
11	91.29	1.99	1115.	7.30	6.90	11.28	.00	2.15	3.70	11.80	.41	.00	1.35	5.22	11.48
12	105.50	1.79	993.	7.34	6.40	9.89	.00	1.94	3.35	10.40	.38	.00	1.21	4.78	10.06
1985	1057.65	3.70	2248.	7.03	11.25	23.75	.00	4.00	6.52	25.79	.61	.01	2.50	7.99	26.42

LOCATION : MK01 TILLA OUTFALL 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	18.46	.99	671.	7.96	3.04	5.78	.00	2.34	2.72	4.83	.23	.03	2.18	4.62	3.28
2	29.80	.84	570.	8.03	2.80	4.94	.00	1.99	2.31	4.10	.19	.03	1.85	3.91	2.78
3	11.48	1.04	705.	7.94	3.11	6.05	.00	2.46	2.85	5.07	.24	.03	2.29	4.85	3.45
4	10.06	1.10	746.	7.91	3.20	6.36	.00	2.60	3.02	5.36	.25	.03	2.42	5.13	3.65
5	2.15	.99	671.	7.96	3.04	5.78	.00	2.34	2.72	4.83	.23	.03	2.18	4.62	3.28
6	2.08	1.19	807.	7.88	3.33	6.83	.00	2.81	3.27	5.80	.27	.03	2.62	5.55	3.94
7	5.84	1.23	834.	7.87	3.38	7.03	.00	2.91	3.38	6.00	.28	.03	2.71	5.74	4.08
8	5.28	1.16	787.	7.89	3.29	6.67	.00	2.74	3.18	5.66	.26	.03	2.56	5.41	3.85
9	7.89	.99	671.	7.96	3.04	5.78	.00	2.34	2.72	4.83	.23	.03	2.18	4.62	3.28
10	13.74	1.03	699.	7.94	3.10	5.99	.00	2.43	2.83	5.02	.23	.03	2.27	4.80	3.41
11	20.38	1.00	678.	7.96	3.05	5.83	.00	2.36	2.74	4.88	.23	.03	2.20	4.66	3.32
12	24.81	.92	624.	7.99	2.93	5.39	.00	2.17	2.52	4.49	.21	.03	2.02	4.29	3.05
1985	151.97	.98	667.	7.96	3.02	5.74	.00	2.32	2.70	4.79	.22	.03	2.16	4.58	3.26

LOCATION : MN01 UPPER P.S. NO 8 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	20.95	1.78	1144.	7.36	5.89	11.78	.00	3.34	3.33	10.76	.32	.01	2.40	6.84	8.51
2	10.12	2.35	1526.	7.24	6.68	14.89	.00	4.70	4.50	14.34	.39	.01	3.17	8.16	12.59
3	18.32	1.75	1124.	7.37	5.85	11.60	.00	3.27	3.27	10.58	.32	.01	2.36	6.76	8.31
4	20.56	1.62	1038.	7.40	5.65	10.83	.00	2.98	3.01	9.77	.30	.01	2.19	6.41	7.45
5	19.83	1.37	872.	7.47	5.23	9.25	.00	2.42	2.51	8.21	.27	.01	1.85	5.67	5.88
6	16.63	1.49	951.	7.44	5.43	10.02	.00	2.69	2.75	8.96	.29	.01	2.01	6.03	6.62
7	28.85	1.49	951.	7.44	5.43	10.02	.00	2.69	2.75	8.96	.29	.01	2.01	6.03	6.62
8	27.25	1.60	1024.	7.41	5.61	10.70	.00	2.93	2.97	9.64	.30	.01	2.16	6.35	7.32
9	32.19	1.48	945.	7.44	5.42	9.96	.00	2.66	2.73	8.90	.28	.01	2.00	6.01	6.56
10	25.44	1.48	945.	7.44	5.42	9.96	.00	2.66	2.73	8.90	.28	.01	2.00	6.01	6.56
11	24.19	1.59	1018.	7.41	5.60	10.64	.00	2.91	2.95	9.58	.30	.01	2.14	6.32	7.26
12	26.11	1.59	1018.	7.41	5.60	10.64	.00	2.91	2.95	9.58	.30	.01	2.14	6.32	7.26
1985	270.44	1.59	1018.	7.41	5.60	10.65	.00	2.92	2.95	9.59	.30	.01	2.15	6.31	7.29

LOCATION : MN02 MANDURA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	14.72	2.30	1376.	7.54	7.03	13.69	.00	3.87	4.12	14.06	.33	.01	1.98	5.50	14.88
2	4.97	5.56	3735.	7.15	12.21	31.72	.00	10.72	10.00	39.30	.79	.02	4.79	14.93	41.07
3	15.58	2.21	1315.	7.55	6.86	13.13	.00	3.69	3.96	13.42	.31	.01	1.90	5.26	14.22
4	14.52	3.18	1984.	7.39	8.61	18.96	.00	5.62	5.70	20.50	.45	.01	2.74	7.93	21.60
5	13.96	1.62	926.	7.69	5.65	9.32	.00	2.58	2.90	9.35	.23	.01	1.39	3.70	9.95
6	15.90	2.15	1275.	7.56	6.74	12.75	.00	3.58	3.85	13.00	.31	.01	1.85	5.09	13.77
7	21.23	2.33	1396.	7.53	7.09	13.88	.00	3.93	4.17	14.27	.33	.01	2.01	5.58	15.11
8	18.56	2.31	1383.	7.53	7.05	13.76	.00	3.89	4.14	14.13	.33	.01	1.99	5.52	14.96
9	19.98	2.23	1329.	7.55	6.90	13.26	.00	3.73	3.99	13.56	.32	.01	1.92	5.31	14.37
10	13.84	2.23	1329.	7.55	6.90	13.26	.00	3.73	3.99	13.56	.32	.01	1.92	5.31	14.37
11	16.01	2.60	1580.	7.48	7.60	15.53	.00	4.46	4.66	16.22	.37	.01	2.24	6.31	17.14
12	14.63	2.46	1484.	7.51	7.34	14.68	.00	4.18	4.41	15.20	.35	.01	2.12	5.93	16.08
1985	183.90	2.42	1460.	7.51	7.28	14.47	.00	4.11	4.33	14.97	.34	.01	2.08	5.84	15.82

LOCATION : MN03 NASHART OUTFALL 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	2.05	1324.	7.40	6.22	13.30	.00	3.96	3.97	12.39	.35	.01	2.87	7.41	10.38
2	14.27	3.09	2043.	7.22	7.42	18.29	.00	6.54	6.41	18.89	.53	.01	4.32	9.73	18.31
3	30.13	1.84	1181.	7.45	5.94	12.15	.00	3.47	3.50	11.08	.32	.01	2.57	6.84	8.94
4	-	1.80	1154.	7.46	5.88	11.93	.00	3.37	3.41	10.83	.31	.01	2.52	6.73	8.67
5	-	1.70	1086.	7.48	5.74	11.35	.00	3.15	3.19	10.22	.29	.01	2.38	6.44	8.01
6	25.00	1.71	1093.	7.48	5.75	11.41	.00	3.17	3.21	10.28	.29	.01	2.39	6.47	8.07
7	42.56	1.65	1053.	7.50	5.67	11.06	.00	3.03	3.08	9.91	.28	.01	2.31	6.30	7.69
8	-	1.88	1208.	7.44	5.99	12.38	.00	3.56	3.59	11.33	.32	.01	2.63	6.95	9.21
9	-	1.87	1202.	7.44	5.98	12.32	.00	3.54	3.56	11.27	.32	.01	2.61	6.92	9.14
10	-	1.84	1181.	7.45	5.94	12.15	.00	3.47	3.50	11.08	.32	.01	2.57	6.84	8.94
11	-	2.00	1290.	7.41	6.16	13.03	.00	3.84	3.85	12.07	.34	.01	2.80	7.28	10.03
12	33.05	1.47	931.	7.55	5.39	9.97	.00	2.63	2.69	8.80	.25	.01	2.05	5.76	6.55
1985	-	1.91	1229.	7.43	6.02	12.52	.00	3.64	3.66	11.51	.33	.01	2.67	6.97	9.49

LOCATION : MN04 ZEINI P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	8.23	3.48	2120.	7.69	10.65	22.13	.00	3.59	6.57	24.02	.52	.02	2.35	6.49	23.85
2	3.92	10.92	6589.	7.19	17.88	51.56	.00	14.68	21.55	76.12	.85	.03	7.39	4.13	101.65
3	9.95	2.93	1789.	7.76	9.85	19.08	.00	2.91	5.50	20.19	.50	.02	1.98	7.92	19.18
4	7.57	3.14	1916.	7.73	10.17	20.27	.00	3.16	5.91	21.65	.51	.02	2.12	8.16	20.93
5	9.31	3.15	1922.	7.73	10.18	20.33	.00	3.18	5.93	21.72	.51	.02	2.12	8.17	21.02
6	11.09	2.64	1615.	7.81	9.39	17.37	.00	2.56	4.93	18.18	.49	.02	1.78	7.55	16.80
7	15.04	3.36	2048.	7.70	10.48	21.48	.00	3.44	6.34	23.18	.52	.02	2.27	8.38	22.81
8	13.29	2.57	1573.	7.82	9.28	16.95	.00	2.47	4.80	17.69	.48	.02	1.73	7.45	16.24
9	13.56	2.74	1675.	7.79	9.55	17.97	.00	2.68	5.13	18.87	.49	.02	1.85	7.68	17.61
10	8.84	4.11	2499.	7.62	11.49	25.37	.00	4.41	7.81	28.41	.55	.02	2.77	8.93	29.45
11	8.92	5.08	3083.	7.52	12.65	29.96	.00	5.72	9.73	35.17	.60	.03	3.43	9.24	38.53
12	7.80	3.46	2108.	7.69	10.63	22.02	.00	3.57	6.53	23.88	.52	.02	2.33	8.47	23.68
1985	117.52	3.52	2143.	7.68	10.66	22.28	.00	3.72	6.67	24.30	.53	.02	2.37	8.02	24.78

LOCATION : MT01 TIRA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	25.41	5.40	3027.	7.57	12.52	27.23	.00	4.82	10.85	35.05	.64	.02	2.28	7.26	41.79
2	17.71	16.05	11846.	7.10	32.81	92.73	.00	16.31	26.12	151.13	1.89	.03	6.80	44.33	144.30
3	22.75	9.14	5793.	7.34	20.13	50.43	.00	8.68	16.21	71.01	1.08	.02	3.87	17.04	76.04
4	22.28	8.72	5462.	7.36	19.31	47.83	.00	8.24	15.61	66.66	1.03	.02	3.69	15.74	72.08
5	22.78	8.51	5298.	7.37	18.89	46.53	.00	8.02	15.31	64.52	1.00	.02	3.60	15.11	70.11
6	34.21	6.19	3574.	7.51	14.19	32.12	.00	5.61	11.98	42.09	.73	.02	2.62	8.97	48.81
7	49.80	5.83	3322.	7.54	13.44	29.89	.00	5.25	11.46	38.84	.69	.02	2.46	8.16	45.59
8	50.62	5.48	3081.	7.56	12.70	27.73	.00	4.90	10.96	35.75	.65	.02	2.32	7.42	42.49
9	52.07	5.72	3246.	7.55	13.21	29.21	.00	5.14	11.30	37.86	.67	.02	2.42	7.93	44.61
10	34.53	6.00	3440.	7.52	13.80	30.94	.00	5.42	11.71	40.37	.71	.02	2.54	8.54	47.11
11	27.54	7.22	4318.	7.44	16.31	38.52	.00	6.67	13.46	51.75	.85	.02	3.05	11.50	58.15
12	27.60	6.71	3945.	7.48	15.27	35.35	.00	6.14	12.72	46.90	.79	.02	2.84	10.21	53.50
1985	387.30	6.94	4183.	7.46	16.06	37.49	.00	6.41	13.05	50.11	.82	.02	2.93	11.48	55.95

LOCATION : MI01 EDFINA BARRAGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.41	241.	8.15	.93	1.31	.00	1.30	.97	.99	.24	.03	1.37	.96	1.14
2	-	.43	258.	8.13	1.01	1.47	.00	1.36	1.02	1.11	.25	.03	1.44	1.08	1.20
3	-	.61	434.	7.98	1.94	3.39	.00	1.93	1.45	2.53	.35	.03	2.04	2.49	1.70
4	-	.61	434.	7.98	1.94	3.39	.00	1.93	1.45	2.53	.35	.03	2.04	2.49	1.70
5	-	.68	515.	7.93	2.38	4.36	.00	2.16	1.62	3.26	.40	.03	2.28	3.22	1.90
6	-	.67	503.	7.94	2.31	4.21	.00	2.12	1.59	3.15	.39	.03	2.25	3.11	1.87
7	-	.44	266.	8.12	1.06	1.56	.00	1.39	1.05	1.17	.26	.03	1.47	1.14	1.23
8	-	.53	350.	8.04	1.50	2.44	.00	1.68	1.26	1.81	.31	.03	1.77	1.78	1.48
9	-	.66	491.	7.94	2.25	4.07	.00	2.09	1.57	3.04	.38	.03	2.21	3.00	1.84
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	.58	401.	8.00	1.77	3.02	.00	1.84	1.38	2.24	.34	.03	1.94	2.21	1.62
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : MI02 EAST EDFINA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 7 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.42	252.	7.92	.78	1.19	.00	1.42	1.14	.88	.22	.02	1.58	.85	1.20
2	-	.44	269.	7.90	.85	1.35	.00	1.49	1.19	.99	.23	.02	1.66	.97	1.26
3	-	.61	439.	7.76	1.69	3.12	.00	2.07	1.65	2.30	.32	.02	2.30	2.27	1.74
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	.60	427.	7.76	1.63	2.99	.00	2.03	1.62	2.21	.31	.02	2.27	2.18	1.72
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	.58	405.	7.78	1.52	2.75	.00	1.97	1.57	2.02	.30	.02	2.19	1.99	1.66
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	.54	363.	7.81	1.31	2.29	.00	1.83	1.46	1.68	.28	.02	2.04	1.65	1.54
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : MI03 WEST EDFINA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 5 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.43	259.	7.73	.84	1.26	.00	1.48	1.12	.96	.23	.01	1.46	.98	1.35
2	-	.42	250.	7.74	.80	1.18	.00	1.44	1.10	.90	.23	.01	1.42	.91	1.33
3	-	.61	450.	7.58	1.90	3.39	.00	2.10	1.59	2.58	.28	.01	2.07	2.67	1.80
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	.60	438.	7.59	1.83	3.24	.00	2.06	1.57	2.46	.28	.01	2.04	2.54	1.78
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	.53	356.	7.64	1.37	2.29	.00	1.82	1.38	1.74	.26	.01	1.80	1.79	1.61
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : MI04 BALAMOUN P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.50	339.	8.02	1.76	2.78	.00	1.26	1.36	2.01	.28	.03	1.80	1.61	1.47
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	.46	311.	8.44	1.68	2.55	.00	1.16	1.25	1.85	.25	.06	1.63	1.46	1.36
4	-	.51	345.	7.92	1.77	2.84	.00	1.28	1.39	2.05	.28	.02	1.83	1.65	1.50
5	-	.56	380.	7.44	1.96	3.13	.00	1.41	1.53	2.25	.31	.01	2.02	1.81	1.65
6	-	.50	339.	8.02	1.76	2.78	.00	1.26	1.36	2.01	.28	.03	1.80	1.61	1.47
7	-	.54	366.	7.63	1.82	3.02	.00	1.36	1.47	2.17	.30	.01	1.95	1.75	1.59
8	-	.46	311.	8.44	1.68	2.55	.00	1.16	1.25	1.85	.25	.06	1.63	1.46	1.36
9	-	.50	339.	8.02	1.76	2.78	.00	1.26	1.36	2.01	.28	.03	1.80	1.61	1.47
10	-	.61	414.	7.01	1.94	3.41	.00	1.53	1.66	2.45	.34	.00	2.21	1.98	1.80
11	-	.53	359.	7.72	1.81	2.96	.00	1.33	1.45	2.13	.29	.01	1.91	1.71	1.56
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : MI05 BAHR EL ABASY 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.58	405.	7.64	1.49	2.85	.00	1.97	1.44	1.94	.37	.02	2.81	1.13	1.77
2	-	.48	336.	7.73	1.35	2.29	.00	1.63	1.19	1.61	.31	.02	2.03	1.55	1.15
3	-	.42	294.	7.78	1.27	1.92	.00	1.43	1.05	1.41	.27	.01	1.62	1.67	.84
4	-	.44	308.	7.76	1.30	2.05	.00	1.50	1.10	1.47	.28	.01	1.75	1.64	.94
5	-	.49	343.	7.72	1.37	2.34	.00	1.67	1.22	1.64	.31	.02	2.11	1.52	1.20
6	-	.45	315.	7.75	1.31	2.11	.00	1.53	1.12	1.51	.29	.01	1.82	1.62	.99
7	-	.39	273.	7.82	1.22	1.74	.00	1.33	.97	1.31	.25	.01	1.43	1.70	.71
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	.47	329.	7.74	1.34	2.23	.00	1.60	1.17	1.57	.30	.01	1.96	1.57	1.09
10	-	.54	378.	7.68	1.43	2.63	.00	1.84	1.34	1.81	.35	.02	2.48	1.33	1.50
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : MI06 MIT YAZED CANAL 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.88	614.	7.63	2.12	4.47	.00	2.63	2.44	3.38	.45	.02	3.20	3.12	2.57
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	.46	301.	7.91	1.52	2.34	.00	1.08	1.35	1.67	.24	.02	1.72	1.41	1.19
4	-	.47	308.	7.90	1.54	2.39	.00	1.11	1.38	1.71	.24	.02	1.75	1.45	1.22
5	-	.50	329.	7.87	1.59	2.56	.00	1.21	1.46	1.83	.26	.02	1.86	1.56	1.31
6	-	.45	294.	7.92	1.50	2.28	.00	1.04	1.32	1.64	.23	.02	1.68	1.37	1.16
7	-	.29	183.	8.11	1.19	1.30	.00	.57	.88	1.02	.15	.02	1.12	.79	.69
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	.47	308.	7.90	1.54	2.39	.00	1.11	1.38	1.71	.24	.02	1.75	1.45	1.22
10	-	.52	344.	7.85	1.62	2.67	.00	1.27	1.51	1.91	.27	.02	1.93	1.64	1.38
11	-	.58	388.	7.81	1.72	3.00	.00	1.48	1.67	2.15	.30	.02	2.14	1.87	1.57
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : MI07 BAHR BASANDELA 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 11 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.47	329.	7.78	1.35	2.22	.00	1.46	1.39	1.62	.29	.02	1.82	1.52	1.41
2	-	.51	357.	7.75	1.41	2.41	.00	1.59	1.51	1.76	.31	.02	1.98	1.65	1.52
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	.45	315.	7.80	1.33	2.12	.00	1.40	1.33	1.55	.28	.02	1.74	1.45	1.35
5	-	.49	343.	7.77	1.38	2.31	.00	1.52	1.45	1.69	.30	.02	1.90	1.58	1.47
6	-	.39	273.	7.87	1.23	1.81	.00	1.21	1.15	1.34	.24	.02	1.51	1.26	1.17
7	-	.35	245.	7.91	1.17	1.60	.00	1.09	1.04	1.20	.22	.01	1.36	1.13	1.05
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	.43	301.	7.82	1.30	2.02	.00	1.34	1.27	1.48	.26	.02	1.67	1.39	1.29
10	-	.54	378.	7.72	1.45	2.55	.00	1.68	1.60	1.86	.33	.02	2.09	1.74	1.61
11	-	.47	329.	7.78	1.35	2.22	.00	1.46	1.39	1.62	.29	.02	1.82	1.52	1.41
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : MI08 B. TIRA bef.mix 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 12 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.46	322.	7.87	1.54	2.41	.00	1.49	1.09	1.75	.28	.02	1.73	1.61	1.24
2	-	.52	363.	7.81	1.64	2.74	.00	1.68	1.23	1.97	.31	.02	1.96	1.82	1.40
3	-	.41	287.	7.92	1.45	2.12	.00	1.33	.97	1.56	.25	.02	1.54	1.43	1.11
4	-	.45	315.	7.88	1.52	2.35	.00	1.46	1.07	1.71	.27	.02	1.69	1.58	1.21
5	-	.50	349.	7.83	1.60	2.63	.00	1.62	1.19	1.90	.30	.02	1.88	1.75	1.35
6	-	.38	266.	7.95	1.40	1.94	.00	1.23	.90	1.44	.23	.02	1.43	1.33	1.03
7	-	.38	266.	7.95	1.40	1.94	.00	1.23	.90	1.44	.23	.02	1.43	1.33	1.03
8	-	.37	259.	7.96	1.38	1.88	.00	1.20	.88	1.40	.22	.02	1.39	1.29	1.00
9	-	.57	398.	7.77	1.71	3.00	.00	1.85	1.35	2.16	.34	.02	2.15	2.00	1.54
10	-	.54	377.	7.80	1.67	2.85	.00	1.75	1.28	2.05	.32	.02	2.03	1.89	1.46
11	-	.46	322.	7.87	1.54	2.41	.00	1.49	1.09	1.75	.28	.02	1.73	1.61	1.24
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : MI09 B. TIRA aft.mix 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 11 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	2.06	1394.	7.20	7.54	16.27	.00	3.44	3.51	14.06	.56	.01	3.37	6.96	11.22
2	-	.54	333.	7.78	1.15	1.82	.00	1.95	1.41	1.49	.15	.01	1.47	1.83	1.68
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	2.42	1727.	7.13	9.39	20.84	.00	3.68	4.01	18.42	.66	.01	3.73	8.93	14.10
6	-	.93	550.	7.54	2.50	4.57	.00	2.45	1.95	3.70	.25	.01	2.06	2.65	3.64
7	-	1.49	929.	7.34	4.83	9.79	.00	3.00	2.72	8.16	.41	.01	2.76	4.43	7.09
8	-	1.47	914.	7.34	4.74	9.59	.00	2.98	2.69	7.98	.40	.01	2.74	4.35	6.96
9	-	1.53	959.	7.33	5.01	10.21	.00	3.03	2.78	8.53	.42	.01	2.80	4.58	7.36
10	-	1.46	906.	7.35	4.69	9.48	.00	2.97	2.68	7.89	.40	.01	2.72	4.31	6.89
11	-	.49	308.	7.82	1.00	1.54	.00	1.87	1.34	1.26	.13	.01	1.38	1.74	1.47
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

5. DISCHARGE AND CHEMICAL COMPOSITION WESTERN DELTA DURING 1985

LOCATION : WB01 BARSIQ P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	12.09	3.51	2134.	7.81	11.36	23.46	.00	3.53	5.81	24.55	.62	.03	2.43	9.55	22.49
2	10.64	6.66	4368.	7.53	17.53	44.04	.00	6.70	11.02	52.18	1.09	.04	4.63	17.92	48.39
3	13.46	3.96	2441.	7.75	12.33	26.56	.00	3.98	6.55	28.29	.69	.03	2.75	10.75	25.98
4	14.11	3.28	1978.	7.84	10.85	21.85	.00	3.30	5.43	22.66	.58	.03	2.27	8.93	20.73
5	18.13	4.70	2956.	7.68	13.85	31.52	.00	4.73	7.77	34.61	.80	.03	3.26	12.73	31.89
6	19.46	2.93	1745.	7.88	10.05	19.37	.00	2.95	4.85	19.84	.53	.03	2.03	7.99	18.12
7	24.03	3.49	2120.	7.81	11.32	23.32	.00	3.51	5.77	24.38	.61	.03	2.42	9.49	22.33
8	26.93	3.82	2345.	7.77	12.03	25.60	.00	3.84	6.32	27.12	.66	.03	2.65	10.38	24.88
9	28.76	2.67	1573.	7.92	9.44	17.50	.00	2.68	4.42	17.79	.49	.03	1.85	7.29	16.21
10	20.39	3.00	1791.	7.87	10.22	19.87	.00	3.02	4.96	20.40	.54	.03	2.08	8.18	18.64
11	13.04	3.73	2283.	7.78	11.84	24.98	.00	3.75	6.17	26.37	.65	.03	2.59	10.14	24.18
12	15.77	3.64	2222.	7.79	11.65	24.36	.00	3.66	6.02	25.62	.64	.03	2.52	9.90	23.49
1985	216.81	3.62	2220.	7.79	11.68	24.39	.00	3.64	6.00	25.63	.63	.03	2.51	9.85	23.51

LOCATION : WE01 ETAY BARUD P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	4.88	1.10	695.	7.65	3.29	6.31	.00	2.53	2.52	5.23	.27	.02	2.29	3.98	4.27
2	2.90	1.16	743.	7.62	3.47	6.81	.00	2.67	2.66	5.67	.29	.02	2.41	4.28	4.57
3	5.63	1.08	679.	7.65	3.23	6.15	.00	2.49	2.47	5.09	.27	.02	2.24	3.88	4.17
4	4.15	1.30	858.	7.57	3.89	7.98	.00	3.01	2.98	6.73	.32	.02	2.70	5.02	5.30
5	6.56	.88	525.	7.74	2.63	4.56	.00	2.01	2.01	3.73	.22	.02	1.83	2.93	3.20
6	7.74	.78	452.	7.79	2.33	3.80	.00	1.78	1.79	3.11	.19	.01	1.62	2.49	2.74
7	9.01	1.05	655.	7.67	3.14	5.91	.00	2.41	2.40	4.87	.26	.02	2.18	3.73	4.02
8	9.60	1.17	751.	7.62	3.50	6.89	.00	2.70	2.68	5.74	.29	.02	2.43	4.34	4.62
9	9.96	1.09	687.	7.65	3.26	6.23	.00	2.51	2.49	5.16	.27	.02	2.27	3.93	4.22
10	9.80	1.04	647.	7.67	3.11	5.83	.00	2.39	2.38	4.80	.26	.02	2.16	3.68	3.97
11	7.13	.86	511.	7.75	2.57	4.41	.00	1.97	1.97	3.60	.21	.02	1.79	2.84	3.11
12	6.61	1.10	695.	7.65	3.29	6.31	.00	2.53	2.52	5.23	.27	.02	2.29	3.98	4.27
1985	83.97	1.04	648.	7.67	3.12	5.85	.00	2.39	2.38	4.82	.26	.02	2.16	3.69	3.97

LOCATION : WE02 SHUBRAKHIT P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 17 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	18.19	1.33	851.	7.54	4.12	8.44	.00	2.83	2.85	6.94	.30	.02	2.82	4.63	5.45
2	12.76	1.44	934.	7.50	4.41	9.30	.00	3.06	3.08	7.73	.33	.02	3.06	5.08	6.05
3	22.17	1.04	637.	7.64	3.33	6.18	.00	2.22	2.23	4.97	.24	.02	2.21	3.48	3.95
4	16.71	1.09	673.	7.62	3.47	6.57	.00	2.32	2.33	5.30	.25	.02	2.31	3.67	4.20
5	19.40	.85	503.	7.73	2.80	4.73	.00	1.81	1.82	3.78	.19	.01	1.80	2.75	3.04
6	16.99	.78	455.	7.77	2.60	4.20	.00	1.67	1.67	3.36	.18	.01	1.65	2.49	2.71
7	27.01	1.08	666.	7.63	3.44	6.49	.00	2.30	2.31	5.23	.25	.02	2.29	3.63	4.15
8	23.96	1.17	731.	7.59	3.69	7.19	.00	2.49	2.51	5.63	.27	.02	2.48	3.99	4.61
9	27.47	1.16	724.	7.60	3.66	7.11	.00	2.47	2.48	5.76	.26	.02	2.46	3.95	4.56
10	26.59	1.00	608.	7.66	3.22	5.87	.00	2.13	2.14	4.71	.23	.01	2.12	3.32	3.75
11	19.93	1.08	666.	7.63	3.44	6.49	.00	2.30	2.31	5.23	.25	.02	2.29	3.63	4.15
12	20.47	1.13	702.	7.61	3.58	6.88	.00	2.41	2.42	5.56	.26	.02	2.40	3.83	4.41
1985	251.65	1.09	673.	7.62	3.48	6.59	.00	2.32	2.33	5.31	.25	.02	2.31	3.67	4.21

LOCATION : WE03 ZARQUN P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	13.19	1.28	793.	7.72	4.23	8.13	.00	2.44	2.80	6.84	.28	.02	2.31	3.57	6.46
2	9.13	1.68	1071.	7.60	5.21	11.11	.00	3.20	3.67	9.66	.37	.02	3.03	3.96	9.89
3	12.57	1.26	779.	7.73	4.18	7.98	.00	2.40	2.76	6.71	.28	.02	2.27	3.54	6.31
4	17.00	1.39	869.	7.68	4.51	8.95	.00	2.65	3.04	7.60	.31	.02	2.51	3.71	7.35
5	18.77	.94	564.	7.85	3.34	5.56	.00	1.79	2.06	4.63	.21	.02	1.69	2.98	3.99
6	18.61	1.33	827.	7.70	4.36	8.50	.00	2.53	2.91	7.18	.29	.02	2.40	3.64	6.86
7	17.75	1.31	814.	7.71	4.31	8.35	.00	2.49	2.87	7.05	.29	.02	2.36	3.61	6.70
8	21.18	1.35	841.	7.70	4.41	8.65	.00	2.57	2.95	7.32	.30	.02	2.43	3.66	7.03
9	24.68	1.26	779.	7.73	4.18	7.98	.00	2.40	2.76	6.71	.28	.02	2.27	3.54	6.31
10	18.36	1.31	814.	7.71	4.31	8.35	.00	2.49	2.87	7.05	.29	.02	2.36	3.61	6.70
11	19.19	1.44	903.	7.67	4.63	9.33	.00	2.74	3.15	7.95	.32	.02	2.60	3.76	7.77
12	14.93	1.45	910.	7.67	4.65	9.40	.00	2.76	3.17	8.02	.32	.02	2.62	3.77	7.66
1985	205.36	1.32	819.	7.71	4.33	8.42	.00	2.51	2.88	7.11	.29	.02	2.37	3.60	6.80

LOCATION : WE04 EDKO IRR. P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	18.55	1.22	758.	7.63	3.90	7.57	.00	2.44	2.66	6.22	.29	.02	2.43	3.89	5.27
2	7.39	1.29	816.	7.60	4.15	8.23	.00	2.58	2.81	6.81	.30	.02	2.57	4.29	5.63
3	25.44	1.26	791.	7.61	4.04	7.94	.00	2.52	2.74	6.55	.30	.02	2.51	4.12	5.48
4	26.22	1.13	684.	7.66	3.58	6.73	.00	2.26	2.46	5.50	.27	.02	2.25	3.41	4.81
5	21.84	.92	521.	7.75	2.85	4.88	.00	1.84	2.00	3.95	.22	.02	1.83	2.39	3.78
6	33.87	1.00	581.	7.71	3.12	5.57	.00	2.00	2.18	4.52	.24	.02	1.99	2.76	4.17
7	31.16	1.11	668.	7.67	3.51	6.55	.00	2.22	2.42	5.34	.26	.02	2.21	3.30	4.71
8	30.52	1.16	708.	7.65	3.68	7.01	.00	2.32	2.53	5.74	.27	.02	2.31	3.57	4.97
9	31.37	1.10	660.	7.67	3.47	6.46	.00	2.20	2.40	5.27	.26	.02	2.19	3.25	4.66
10	32.68	1.03	605.	7.70	3.23	5.84	.00	2.06	2.24	4.74	.24	.02	2.05	2.90	4.32
11	25.88	1.11	668.	7.67	3.51	6.55	.00	2.22	2.42	5.34	.26	.02	2.21	3.30	4.71
12	17.15	1.20	741.	7.63	3.83	7.38	.00	2.40	2.61	6.06	.28	.02	2.39	3.78	5.17
1985	302.07	1.11	669.	7.67	3.52	6.57	.00	2.22	2.42	5.36	.26	.02	2.21	3.32	4.72

LOCATION : WE05 DILINGAT P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	14.92	1.05	733.	7.68	2.63	5.48	.00	3.38	2.58	4.55	.28	.02	2.75	5.22	2.79
2	9.93	1.10	768.	7.66	2.70	5.71	.00	3.54	2.71	4.77	.29	.02	2.88	5.47	2.93
3	14.80	1.10	768.	7.66	2.70	5.71	.00	3.54	2.71	4.77	.29	.02	2.88	5.47	2.93
4	13.79	1.10	768.	7.66	2.70	5.71	.00	3.54	2.71	4.77	.29	.02	2.88	5.47	2.93
5	14.85	1.10	768.	7.66	2.70	5.71	.00	3.54	2.71	4.77	.29	.02	2.88	5.47	2.93
6	13.57	1.10	768.	7.66	2.70	5.71	.00	3.54	2.71	4.77	.29	.02	2.88	5.47	2.93
7	18.18	.93	649.	7.73	2.48	4.91	.00	3.00	2.29	4.03	.24	.02	2.44	4.63	2.47
8	21.57	1.00	698.	7.70	2.57	5.25	.00	3.22	2.46	4.33	.26	.02	2.62	4.97	2.66
9	21.66	.98	684.	7.71	2.54	5.15	.00	3.16	2.41	4.25	.26	.02	2.57	4.88	2.61
10	20.08	.93	649.	7.73	2.48	4.91	.00	3.00	2.29	4.03	.24	.02	2.44	4.63	2.47
11	19.55	.96	670.	7.71	2.52	5.06	.00	3.09	2.36	4.16	.25	.02	2.52	4.78	2.55
12	18.00	.98	684.	7.71	2.54	5.15	.00	3.16	2.41	4.25	.26	.02	2.57	4.88	2.61
1985	200.90	1.02	709.	7.69	2.59	5.32	.00	3.27	2.50	4.40	.27	.02	2.66	5.05	2.70

LOCATION : WE06 KHANDAK EL GH. P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	5.11	1.21	789.	7.73	3.92	7.69	.00	2.68	2.58	6.36	.25	.02	2.47	5.14	4.24
2	1.53	1.10	706.	7.78	3.62	6.83	.00	2.43	2.35	5.60	.23	.02	2.24	4.65	3.69
3	4.79	1.17	759.	7.75	3.81	7.37	.00	2.59	2.50	6.08	.24	.02	2.39	4.96	4.04
4	4.80	1.14	736.	7.76	3.73	7.14	.00	2.52	2.43	5.87	.24	.02	2.32	4.83	3.89
5	4.27	.90	559.	7.86	3.07	5.27	.00	1.98	1.92	4.28	.19	.02	1.83	3.76	2.76
6	5.69	.83	509.	7.90	2.87	4.73	.00	1.82	1.77	3.85	.17	.02	1.69	3.45	2.45
7	6.86	1.05	669.	7.80	3.48	6.44	.00	2.32	2.24	5.26	.22	.02	2.14	4.43	3.45
8	7.02	1.16	751.	7.75	3.78	7.29	.00	2.57	2.48	6.01	.24	.02	2.37	4.92	3.99
9	7.49	1.04	662.	7.80	3.46	6.36	.00	2.29	2.22	5.19	.22	.02	2.12	4.38	3.40
10	8.48	.96	603.	7.83	3.24	5.74	.00	2.11	2.05	4.67	.20	.02	1.96	4.02	3.03
11	5.02	1.19	774.	7.74	3.87	7.53	.00	2.63	2.54	6.22	.25	.02	2.43	5.05	4.14
12	5.39	1.07	684.	7.79	3.54	6.59	.00	2.36	2.28	5.39	.22	.02	2.18	4.51	3.55
1985	66.45	1.06	678.	7.79	3.53	6.54	.00	2.34	2.26	5.35	.22	.02	2.16	4.48	3.52

LOCATION : WE07 KHAIRY P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	12.86	1.34	940.	7.29	4.64	9.64	.00	2.89	2.90	7.90	.37	.01	3.00	6.07	4.97
2	7.82	1.40	1010.	7.28	4.97	10.49	.00	3.02	3.03	8.65	.38	.01	3.14	6.69	5.25
3	13.57	1.00	591.	7.42	2.93	5.44	.00	2.16	2.16	4.30	.27	.01	2.24	3.16	3.48
4	12.29	1.13	715.	7.37	3.55	6.93	.00	2.44	2.44	5.54	.31	.01	2.53	4.15	4.04
5	11.96	1.00	591.	7.42	2.93	5.44	.00	2.16	2.16	4.30	.27	.01	2.24	3.16	3.48
6	14.26	.91	512.	7.46	2.52	4.50	.00	1.96	1.97	3.54	.25	.01	2.04	2.56	3.10
7	15.70	1.10	686.	7.38	3.40	6.57	.00	2.37	2.38	5.24	.30	.01	2.47	3.91	3.91
8	15.91	1.09	676.	7.38	3.35	6.45	.00	2.35	2.36	5.14	.30	.01	2.44	3.83	3.87
9	17.26	1.09	676.	7.38	3.35	6.45	.00	2.35	2.36	5.14	.30	.01	2.44	3.83	3.87
10	14.11	1.08	666.	7.39	3.30	6.34	.00	2.33	2.33	5.05	.30	.01	2.42	3.75	3.82
11	13.50	1.15	735.	7.36	3.65	7.17	.00	2.48	2.49	5.75	.31	.01	2.58	4.32	4.13
12	13.50	1.13	715.	7.37	3.55	6.93	.00	2.44	2.44	5.54	.31	.01	2.53	4.15	4.04
1985	162.73	1.11	696.	7.38	3.48	6.72	.00	2.39	2.39	5.37	.30	.01	2.48	4.02	3.94

LOCATION : WE08 HALQ EL GAMAL P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	13.90	3.34	2194.	7.49	9.85	23.04	.00	4.63	6.48	23.22	.80	.02	3.79	9.30	22.02
2	11.16	3.13	2038.	7.52	9.39	21.52	.00	4.34	6.07	21.41	.75	.02	3.55	8.85	20.14
3	16.21	2.24	1392.	7.67	7.30	14.96	.00	3.11	4.34	14.10	.54	.02	2.54	6.79	12.73
4	17.62	2.37	1485.	7.64	7.62	15.93	.00	3.29	4.60	15.13	.57	.02	2.68	7.11	13.76
5	20.38	2.05	1259.	7.71	6.84	13.53	.00	2.84	3.98	12.62	.49	.02	2.32	6.31	11.27
6	25.35	1.85	1121.	7.75	6.33	12.02	.00	2.57	3.59	11.10	.44	.02	2.09	5.79	9.79
7	28.61	1.89	1148.	7.74	6.43	12.32	.00	2.62	3.66	11.40	.45	.02	2.14	5.89	10.09
8	28.40	1.72	1032.	7.78	5.99	11.03	.00	2.38	3.34	10.14	.41	.02	1.95	5.44	8.86
9	27.88	1.73	1038.	7.78	6.02	11.11	.00	2.40	3.35	10.21	.41	.02	1.96	5.47	8.93
10	24.99	1.70	1018.	7.79	5.94	10.88	.00	2.36	3.30	9.99	.41	.02	1.92	5.38	8.72
11	20.72	1.80	1086.	7.76	6.20	11.64	.00	2.50	3.49	10.73	.43	.02	2.04	5.65	9.43
12	20.33	2.82	1809.	7.57	8.68	19.26	.00	3.91	5.47	18.80	.67	.02	3.19	8.17	17.46
1985	255.55	2.10	1299.	7.70	7.01	14.01	.00	2.91	4.07	13.10	.50	.02	2.38	6.39	11.80

LOCATION : WE09 HALQ EL GAMAL BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	22.15	1.31	800.	7.63	4.43	8.30	.00	2.49	2.53	7.02	.32	.01	2.17	4.16	6.00
2	42.12	2.16	1430.	7.41	6.69	15.07	.00	4.11	4.16	13.61	.52	.02	3.58	6.24	12.57
3	56.43	1.82	1171.	7.49	5.81	12.36	.00	3.46	3.51	10.85	.44	.02	3.02	5.47	9.76
4	31.90	1.68	1067.	7.52	5.44	11.24	.00	3.20	3.24	9.76	.40	.02	2.79	5.13	8.67
5	41.58	1.44	892.	7.59	4.79	9.33	.00	2.74	2.78	7.96	.35	.02	2.39	4.51	6.91
6	50.79	1.41	871.	7.60	4.71	9.09	.00	2.68	2.72	7.74	.34	.02	2.34	4.43	6.69
7	69.14	1.51	943.	7.57	4.98	9.89	.00	2.87	2.91	8.47	.36	.02	2.50	4.70	7.41
8	71.74	1.58	994.	7.55	5.17	10.44	.00	3.01	3.05	9.00	.38	.02	2.62	4.88	7.92
9	91.18	1.87	1209.	7.48	5.94	12.76	.00	3.56	3.60	11.25	.45	.02	3.10	5.58	10.16
10	93.77	1.98	1292.	7.45	6.23	13.64	.00	3.77	3.82	12.13	.48	.02	3.28	5.84	11.05
11	57.53	1.55	972.	7.56	5.09	10.21	.00	2.95	2.99	8.77	.37	.02	2.57	4.80	7.70
12	58.46	2.00	1307.	7.45	6.28	13.80	.00	3.81	3.86	12.29	.48	.02	3.32	5.88	11.22
1985	686.79	1.73	1106.	7.51	5.60	11.68	.00	3.29	3.33	10.18	.42	.02	2.87	5.23	9.11

LOCATION : WE10 EDKO P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	8.48	4.77	2851.	7.61	13.81	31.46	.00	4.31	7.82	34.02	.79	.03	3.33	8.63	34.96
2	5.79	5.38	3201.	7.56	15.13	35.54	.00	4.72	8.46	38.84	.90	.03	3.76	8.37	40.76
3	9.59	4.49	2691.	7.64	13.19	29.56	.00	4.11	7.53	31.83	.75	.03	3.14	8.69	32.37
4	10.43	3.84	2319.	7.70	11.69	25.08	.00	3.65	6.86	26.79	.64	.03	2.68	8.72	26.52
5	12.21	3.50	2126.	7.74	10.87	22.70	.00	3.40	6.51	24.19	.58	.03	2.44	8.65	23.56
6	13.27	2.87	1768.	7.83	9.28	18.23	.00	2.92	5.85	19.45	.48	.03	2.00	8.37	18.30
7	20.41	3.05	1870.	7.80	9.75	19.52	.00	3.06	6.04	20.79	.51	.03	2.13	8.48	19.77
8	20.55	2.69	1666.	7.86	8.81	16.94	.00	2.78	5.66	18.11	.45	.03	1.88	8.25	16.85
9	20.26	2.61	1621.	7.87	8.60	16.36	.00	2.72	5.58	17.51	.43	.03	1.82	8.19	16.21
10	16.09	3.20	1955.	7.78	10.13	20.58	.00	3.18	6.19	21.92	.53	.03	2.23	8.55	21.02
11	12.78	3.26	1989.	7.78	10.28	21.01	.00	3.22	6.26	22.37	.54	.03	2.28	8.57	21.52
12	9.92	4.10	2468.	7.68	12.30	26.88	.00	3.84	7.13	28.80	.68	.03	2.86	8.73	28.83
1985	159.78	3.38	2057.	7.76	10.61	21.91	.00	3.30	6.38	23.33	.56	.03	2.36	8.48	22.70

LOCATION : WE11 BOSSEILLY P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	13.76	3.11	1951.	7.48	9.83	21.89	.00	3.91	5.39	21.19	.82	.02	3.35	7.48	20.44
2	12.53	4.34	2822.	7.33	12.59	30.86	.00	5.45	7.20	31.67	1.15	.02	4.68	9.67	31.10
3	24.26	1.21	693.	7.89	4.87	7.30	.00	1.52	2.37	6.78	.32	.02	1.30	3.44	6.23
4	22.41	2.25	1366.	7.62	7.72	15.41	.00	2.83	4.06	14.34	.59	.02	2.43	5.77	13.60
5	30.91	1.82	1083.	7.71	6.60	12.09	.00	2.29	3.38	11.10	.48	.02	1.96	4.85	10.42
6	38.82	2.80	1738.	7.52	9.09	19.58	.00	3.52	4.91	18.66	.74	.02	3.02	6.89	17.91
7	42.55	1.79	1063.	7.72	6.51	11.86	.00	2.25	3.33	10.88	.47	.02	1.93	4.78	10.20
8	45.01	1.58	928.	7.77	5.94	10.22	.00	1.99	2.98	9.36	.42	.02	1.70	4.31	8.72
9	36.89	1.33	769.	7.85	5.22	8.25	.00	1.67	2.57	7.60	.35	.02	1.43	3.73	7.02
10	41.98	1.71	1011.	7.74	6.30	11.23	.00	2.15	3.20	10.30	.45	.02	1.84	4.61	9.63
11	29.59	2.21	1340.	7.63	7.62	15.10	.00	2.78	4.00	14.03	.58	.02	2.38	5.69	13.30
12	25.06	2.59	1595.	7.56	8.58	18.00	.00	3.26	4.59	16.99	.68	.02	2.79	6.47	16.24
1985	363.77	2.04	1231.	7.66	7.27	13.94	.00	2.56	3.70	12.86	.54	.02	2.19	5.26	12.19

LOCATION : WT01 TABIA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	40.75	2.15	1335.	7.18	7.59	15.52	.00	2.85	3.80	13.84	.54	.01	2.75	6.11	12.16
2	34.84	3.05	1910.	7.02	9.40	21.66	.00	4.04	5.39	20.40	.77	.01	3.91	6.38	20.31
3	50.58	2.32	1443.	7.14	7.95	16.72	.00	3.08	4.10	15.06	.58	.01	2.97	6.24	13.60
4	55.61	2.26	1405.	7.15	7.83	16.30	.00	3.00	3.99	14.63	.57	.01	2.89	6.20	13.08
5	57.87	2.21	1373.	7.16	7.72	15.95	.00	2.93	3.90	14.27	.56	.01	2.83	6.16	12.66
6	56.40	2.26	1405.	7.15	7.83	16.30	.00	3.00	3.99	14.63	.57	.01	2.89	6.20	13.08
7	61.52	2.34	1456.	7.14	7.99	16.86	.00	3.10	4.13	15.20	.59	.01	3.00	6.25	13.77
8	63.86	2.20	1366.	7.17	7.70	15.88	.00	2.92	3.89	14.20	.55	.01	2.82	6.15	12.58
9	70.02	2.20	1366.	7.17	7.70	15.88	.00	2.92	3.89	14.20	.55	.01	2.82	6.15	12.58
10	67.96	2.01	1245.	7.21	7.29	14.51	.00	2.66	3.55	12.84	.51	.01	2.57	5.97	11.02
11	60.70	2.06	1277.	7.19	7.40	14.88	.00	2.73	3.64	13.20	.52	.01	2.64	6.02	11.42
12	63.35	2.03	1258.	7.20	7.33	14.66	.00	2.69	3.59	12.98	.51	.01	2.60	5.99	11.18
1985	683.46	2.23	1383.	7.16	7.76	16.07	.00	2.95	3.93	14.39	.56	.01	2.85	6.14	12.83

LOCATION : WU01 SHEREISHRA BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 15 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	5.94	1.46	890.	1.37	5.75	9.65	.00	2.36	2.32	8.79	.25	.00	1.64	5.92	6.16
2	7.98	3.41	2286.	1.00	10.58	24.59	.00	5.24	5.43	24.43	.59	.00	3.84	13.36	18.49
3	8.62	2.59	1682.	1.12	8.68	18.47	.00	4.04	4.12	17.54	.45	.00	2.92	10.29	12.95
4	15.15	2.32	1488.	1.16	8.02	16.41	.00	3.65	3.69	15.36	.40	.00	2.61	9.26	11.23
5	-	1.99	1255.	1.23	7.18	13.85	.00	3.16	3.17	12.77	.34	.00	2.24	7.99	9.20
6	9.28	1.26	756.	1.43	5.17	8.03	.00	2.05	2.01	7.36	.22	.00	1.42	5.13	5.09
7	-	1.97	1241.	1.23	7.13	13.69	.00	3.13	3.13	12.61	.34	.00	2.22	7.91	9.08
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	1.36	823.	1.40	5.46	8.84	.00	2.21	2.16	8.07	.24	.00	1.53	5.52	5.62
10	-	1.81	1129.	1.27	6.71	12.43	.00	2.89	2.88	11.39	.31	.00	2.04	7.29	8.14
11	-	2.45	1581.	1.14	8.34	17.40	.00	3.84	3.90	16.40	.42	.00	2.76	9.76	12.05
12	-	3.02	1996.	1.05	9.70	21.71	.00	4.67	4.81	21.11	.52	.00	3.40	11.91	15.80
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : WU02 SHEREISHRA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	41.49	1.79	1018.	8.11	6.50	11.54	.00	2.45	2.74	10.47	.36	.04	1.83	5.33	8.82
2	21.33	3.47	2491.	7.82	12.27	27.81	.00	4.74	5.32	27.53	.70	.05	3.57	17.82	16.86
3	35.46	3.04	2081.	7.88	10.81	23.50	.00	4.15	4.66	22.69	.61	.05	3.12	14.14	14.81
4	37.17	2.73	1798.	7.92	9.75	20.44	.00	3.73	4.19	19.39	.55	.04	2.80	11.68	13.33
5	37.62	2.93	1979.	7.89	10.43	22.41	.00	4.00	4.49	21.50	.59	.05	3.01	13.25	14.29
6	44.73	2.06	1230.	8.05	7.44	14.03	.00	2.81	3.16	12.85	.42	.04	2.11	6.97	10.12
7	51.90	2.73	1798.	7.92	9.75	20.44	.00	3.73	4.19	19.39	.55	.04	2.80	11.68	13.33
8	56.05	2.56	1648.	7.95	9.16	18.79	.00	3.50	3.93	17.66	.52	.04	2.63	10.40	12.52
9	58.18	2.54	1631.	7.96	9.10	18.59	.00	3.47	3.90	17.46	.51	.04	2.61	10.26	12.43
10	60.97	2.47	1571.	7.97	8.85	17.92	.00	3.37	3.79	16.76	.50	.04	2.54	9.75	12.09
11	51.90	2.43	1536.	7.98	8.72	17.53	.00	3.32	3.73	16.36	.49	.04	2.49	9.46	11.90
12	53.95	2.75	1816.	7.92	9.82	20.64	.00	3.76	4.22	19.60	.56	.04	2.83	11.63	13.43
1985	550.75	2.58	1717.	7.94	9.47	19.58	.00	3.59	4.03	18.47	.53	.04	2.70	11.05	12.83

LOCATION : WU1A MARKET BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	61.66	1.77	962.	8.13	5.46	10.02	.00	2.77	2.91	9.20	.32	.04	1.89	4.82	8.46
2	25.55	2.91	1964.	7.91	10.02	21.83	.00	4.04	4.79	21.05	.52	.05	3.11	13.08	14.16
3	33.38	2.72	1779.	7.94	9.23	19.70	.00	3.83	4.48	18.81	.49	.05	2.91	11.46	13.20
4	34.88	2.69	1751.	7.94	9.10	19.37	.00	3.80	4.43	18.47	.48	.05	2.87	11.21	13.05
5	32.02	2.60	1666.	7.96	8.73	18.38	.00	3.71	4.28	17.45	.47	.05	2.78	10.48	12.60
6	35.21	2.72	1779.	7.94	9.23	19.70	.00	3.83	4.48	18.81	.49	.05	2.91	11.46	13.20
7	42.46	2.78	1837.	7.93	9.48	20.37	.00	3.90	4.58	19.51	.50	.05	2.97	11.96	13.51
8	53.27	2.68	1741.	7.95	9.06	19.26	.00	3.79	4.41	18.36	.48	.05	2.86	11.13	13.00
9	55.65	2.43	1510.	7.99	8.04	16.56	.00	3.52	4.00	15.59	.44	.05	2.59	9.16	11.75
10	67.83	2.18	1292.	8.04	7.04	13.97	.00	3.24	3.59	13.02	.39	.04	2.33	7.37	10.50
11	57.15	2.75	1808.	7.93	9.35	20.03	.00	3.87	4.53	19.16	.49	.05	2.94	11.71	13.36
12	64.74	2.78	1837.	7.93	9.48	20.37	.00	3.90	4.58	19.51	.50	.05	2.97	11.96	13.51
1985	563.80	2.53	1615.	7.97	8.55	17.83	.00	3.63	4.17	16.87	.46	.05	2.71	10.11	12.27

LOCATION : WU03 TRUGA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	46.56	2.89	1811.	7.97	9.35	18.42	.00	3.98	4.57	19.33	.54	.04	2.05	12.02	14.31
2	24.27	5.29	3661.	7.71	14.82	35.60	.00	7.29	8.37	41.46	.99	.04	3.77	21.29	33.00
3	41.23	3.96	2612.	7.84	11.88	26.18	.00	5.46	6.26	28.77	.74	.04	2.82	16.25	22.12
4	41.53	3.76	2459.	7.86	11.42	24.74	.00	5.18	5.95	26.95	.70	.04	2.67	15.47	20.59
5	41.69	3.39	2180.	7.90	10.56	22.07	.00	4.67	5.36	23.65	.63	.04	2.41	14.02	17.84
6	47.13	3.26	2083.	7.92	10.25	21.12	.00	4.49	5.16	22.51	.61	.04	2.32	13.50	16.91
7	50.99	3.44	2217.	7.90	10.68	22.43	.00	4.74	5.44	24.09	.64	.04	2.45	14.22	18.21
8	60.93	4.16	2766.	7.81	12.34	27.61	.00	5.73	6.58	30.61	.78	.04	2.96	17.03	23.67
9	61.99	2.52	1545.	8.03	8.42	15.70	.00	3.47	3.99	16.26	.47	.04	1.79	10.52	11.85
10	64.05	3.28	2098.	7.92	10.30	21.27	.00	4.52	5.19	22.68	.61	.04	2.33	13.58	17.05
11	57.07	3.55	2300.	7.88	10.93	23.23	.00	4.89	5.62	25.06	.66	.04	2.52	14.65	19.02
12	60.52	4.03	2666.	7.83	12.04	26.68	.00	5.55	6.37	29.41	.75	.04	2.87	16.52	22.66
1985	597.96	3.54	2302.	7.88	10.97	23.28	.00	4.88	5.61	25.12	.66	.04	2.52	14.60	19.11

LOCATION : WU04 DUSHUDI BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	96.12	3.08	1995.	7.90	10.46	21.80	.00	4.11	4.65	21.89	.57	.04	2.59	12.62	15.97
2	57.93	4.27	2866.	7.76	13.13	30.46	.00	5.70	6.45	32.37	.79	.04	3.60	16.06	25.61
3	71.27	3.55	2335.	7.84	11.55	25.28	.00	4.74	5.36	25.95	.65	.04	2.99	14.06	19.61
4	58.28	3.19	2074.	7.89	10.72	22.62	.00	4.26	4.82	22.83	.59	.04	2.68	12.97	16.80
5	52.61	3.21	2089.	7.89	10.77	22.77	.00	4.29	4.85	23.01	.59	.04	2.70	13.03	16.96
6	51.33	3.13	2031.	7.90	10.58	22.18	.00	4.18	4.72	22.32	.58	.04	2.63	12.78	16.35
7	62.63	3.03	1959.	7.91	10.34	21.43	.00	4.05	4.57	21.47	.56	.04	2.55	12.46	15.60
8	54.26	2.96	1909.	7.92	10.17	20.90	.00	3.95	4.47	20.88	.55	.04	2.49	12.23	15.08
9	55.11	3.01	1945.	7.91	10.29	21.28	.00	4.02	4.54	21.30	.56	.04	2.53	12.40	15.45
10	56.61	3.07	1988.	7.91	10.44	21.73	.00	4.10	4.63	21.81	.57	.04	2.58	12.59	15.90
11	54.39	3.07	1988.	7.91	10.44	21.73	.00	4.10	4.63	21.81	.57	.04	2.58	12.59	15.90
12	43.71	3.02	1952.	7.91	10.32	21.35	.00	4.03	4.56	21.39	.56	.04	2.54	12.43	15.53
1985	714.25	3.22	2098.	7.88	10.81	22.68	.00	4.30	4.86	23.13	.59	.04	2.71	13.04	17.11

LOCATION : WU05 DUSHUDI P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	22.50	4.34	2644.	7.73	11.81	24.13	.00	5.41	7.41	29.89	.68	.02	1.95	11.58	29.84
2	17.84	7.48	4783.	7.49	18.33	43.86	.00	7.34	12.50	57.72	1.13	.03	3.37	19.09	56.20
3	22.18	4.86	2984.	7.68	12.96	27.46	.00	5.72	8.26	34.27	.75	.02	2.19	12.76	34.03
4	22.15	5.48	3398.	7.63	14.30	31.41	.00	6.11	9.26	39.62	.84	.02	2.47	14.21	39.13
5	24.65	5.72	3560.	7.61	14.80	32.92	.00	6.25	9.65	41.73	.88	.02	2.57	14.78	41.13
6	24.36	5.42	3357.	7.63	14.17	31.03	.00	6.07	9.16	39.10	.83	.02	2.44	14.07	38.64
7	25.47	5.41	3351.	7.63	14.15	30.96	.00	6.06	9.15	39.01	.83	.02	2.43	14.04	38.55
8	27.70	4.51	2755.	7.71	12.19	25.22	.00	5.51	7.69	31.31	.70	.02	2.03	11.96	31.20
9	33.00	4.58	2800.	7.71	12.34	25.67	.00	5.55	7.80	31.90	.71	.02	2.06	12.12	31.76
10	31.57	3.91	2368.	7.77	10.82	21.36	.00	5.14	6.72	26.35	.62	.02	1.76	10.62	26.43
11	27.90	4.53	2768.	7.71	12.23	25.35	.00	5.52	7.72	31.48	.70	.02	2.04	12.01	31.36
12	30.53	5.08	3130.	7.66	13.44	28.87	.00	5.86	8.61	36.16	.78	.02	2.29	13.27	35.83
1985	309.85	5.01	3090.	7.67	13.33	28.50	.00	5.82	8.50	35.66	.77	.02	2.25	13.14	35.33

LOCATION : WU06 HARES P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 18 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	50.72	8.79	5394.	7.74	19.65	42.52	.00	9.71	12.88	66.05	1.07	.03	1.99	20.25	67.45
2	30.27	16.74	10517.	7.46	29.98	77.28	.00	16.44	24.53	135.70	2.03	.03	3.80	21.06	153.81
3	38.02	13.08	8143.	7.57	25.51	61.89	.00	13.44	19.16	103.00	1.59	.03	2.96	22.03	112.17
4	36.34	11.05	6837.	7.64	22.84	52.93	.00	11.71	16.19	85.30	1.34	.03	2.50	21.62	90.39
5	34.98	13.76	8583.	7.55	26.37	64.81	.00	14.01	20.16	109.00	1.67	.03	3.12	22.00	119.68
6	38.61	9.30	5718.	7.72	20.40	44.92	.00	10.17	13.63	70.35	1.13	.03	2.10	20.65	72.50
7	34.78	11.27	6978.	7.63	23.14	53.92	.00	11.90	16.51	87.20	1.37	.03	2.55	21.70	92.70
8	44.63	10.81	6683.	7.65	22.51	51.85	.00	11.50	15.84	83.23	1.31	.03	2.45	21.52	87.89
9	40.19	10.84	6703.	7.65	22.55	51.98	.00	11.53	15.88	83.49	1.32	.03	2.45	21.53	88.20
10	47.22	9.38	5769.	7.71	20.51	45.29	.00	10.24	13.74	71.03	1.14	.03	2.12	20.70	73.29
11	45.02	10.31	6363.	7.67	21.82	49.58	.00	11.06	15.11	78.94	1.25	.03	2.33	21.28	82.72
12	46.73	13.18	8208.	7.56	25.64	62.32	.00	13.52	19.31	103.88	1.60	.03	2.99	22.03	113.27
1985	487.51	11.33	7023.	7.63	23.28	54.33	.00	11.92	16.60	87.93	1.38	.03	2.57	21.33	93.91

LOCATION : WU07 ABIES P.S. + ADD. DIESEL PUMPS 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 13 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	4.01	6.10	3841.	7.83	13.04	29.72	.00	8.70	11.19	41.13	1.05	.04	2.47	22.50	37.06
2	2.04	11.08	7606.	7.57	20.30	53.91	.00	15.80	18.99	84.69	1.90	.05	4.50	49.53	67.31
3	3.45	4.39	2642.	7.97	10.22	20.93	.00	6.26	8.36	27.63	.75	.04	1.77	14.52	26.67
4	4.88	7.91	5168.	7.72	15.82	38.73	.00	11.28	14.08	56.33	1.36	.04	3.21	31.75	48.06
5	4.90	7.83	5108.	7.72	15.70	38.34	.00	11.17	13.96	55.64	1.34	.04	3.17	31.33	47.57
6	4.43	8.21	5393.	7.70	16.26	40.20	.00	11.71	14.56	58.92	1.41	.04	3.33	33.35	49.88
7	6.83	6.41	4064.	7.81	13.53	31.28	.00	9.14	11.69	43.68	1.10	.04	2.60	24.03	38.94
8	8.65	5.00	3063.	7.92	11.26	24.10	.00	7.13	9.38	32.34	.86	.04	2.02	17.27	30.38
9	7.21	3.90	2311.	8.03	9.36	18.35	.00	5.56	7.52	23.94	.67	.03	1.57	12.39	23.69
10	6.47	4.89	2987.	7.93	11.07	23.53	.00	6.98	9.19	31.48	.84	.04	1.98	16.76	29.71
11	6.02	6.50	4130.	7.80	13.67	31.73	.00	9.27	11.83	44.42	1.12	.04	2.63	24.48	39.49
12	6.33	5.42	3357.	7.88	11.95	26.26	.00	7.73	10.07	35.65	.93	.04	2.19	19.23	32.93
1985	65.22	6.07	3841.	7.83	13.12	29.83	.00	8.66	11.10	41.23	1.04	.04	2.46	22.66	36.87

LOCATION : WU08 QALAA P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	18.23	3.73	2305.	7.17	11.12	25.54	.00	4.19	6.70	25.96	.79	.01	3.59	6.93	27.11
2	16.41	4.35	2733.	7.10	12.39	29.76	.00	4.89	7.81	31.22	.92	.01	4.19	7.24	33.41
3	19.10	3.30	2013.	7.22	10.21	22.54	.00	3.71	5.93	22.40	.70	.01	3.17	6.61	22.95
4	19.61	2.59	1539.	7.33	8.61	17.47	.00	2.91	4.65	16.75	.55	.01	2.49	5.85	16.51
5	19.20	2.31	1356.	7.38	7.95	15.42	.00	2.60	4.15	14.60	.49	.01	2.22	5.47	14.13
6	17.99	2.18	1272.	7.40	7.63	14.46	.00	2.45	3.92	13.62	.46	.01	2.10	5.28	13.06
7	19.47	2.42	1428.	7.36	8.21	16.23	.00	2.72	4.35	15.44	.51	.01	2.33	5.63	15.05
8	20.05	1.94	1118.	7.45	7.03	12.66	.00	2.18	3.48	11.84	.41	.01	1.86	4.89	11.15
9	20.18	2.86	1718.	7.28	9.23	19.42	.00	3.21	5.14	18.87	.61	.01	2.75	6.17	18.89
10	21.62	2.57	1526.	7.33	8.57	17.32	.00	2.89	4.62	16.59	.55	.01	2.47	5.82	16.34
11	16.63	3.05	1844.	7.26	9.66	20.78	.00	3.43	5.48	20.38	.65	.01	2.93	6.37	20.62
12	19.76	4.15	2594.	7.12	11.99	28.41	.00	4.66	7.45	29.50	.88	.01	3.99	7.16	31.34
1985	228.25	2.93	1771.	7.27	9.46	20.06	.00	3.29	5.26	19.57	.62	.01	2.82	6.10	19.82

LOCATION : WU09 MAX P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS BEEN CONTINUOUSLY RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	228.27	9.68	5970.	7.53	22.11	51.17	.00	8.56	14.60	75.24	1.33	.02	2.72	18.93	78.05
2	164.07	11.02	7036.	7.48	24.59	58.97	.00	9.75	16.62	89.26	1.79	.03	3.10	22.20	92.09
3	172.56	10.54	6649.	7.50	23.71	56.18	.00	9.32	15.89	84.17	1.62	.02	2.96	21.01	87.00
4	183.89	9.47	5807.	7.54	21.72	49.94	.00	8.37	14.28	73.10	1.27	.02	2.66	18.43	75.90
5	168.69	9.10	5522.	7.56	21.02	47.78	.00	8.05	13.72	69.36	1.16	.02	2.56	17.56	72.14
6	174.44	8.32	4933.	7.60	19.54	43.21	.00	7.36	12.55	61.63	.95	.02	2.34	15.77	64.35
7	177.87	8.79	5286.	7.58	20.43	45.96	.00	7.77	13.25	66.26	1.07	.02	2.47	16.84	69.02
8	194.73	7.96	4666.	7.62	18.84	41.10	.00	7.04	12.00	58.14	.85	.02	2.24	14.96	60.82
9	186.28	7.13	4064.	7.67	17.22	36.23	.00	6.31	10.75	50.28	.67	.02	2.00	13.13	52.85
10	221.41	9.72	6001.	7.53	22.19	51.40	.00	8.60	14.66	75.65	1.35	.02	2.73	19.03	78.46
11	213.54	7.43	4279.	7.65	17.81	37.99	.00	6.57	11.20	53.09	.73	.02	2.09	13.79	55.70
12	229.11	6.67	3738.	7.70	16.30	33.52	.00	5.90	10.06	46.05	.57	.02	1.87	12.15	48.54
1985	2314.86	8.76	5283.	7.58	20.47	45.98	.00	7.74	13.21	66.25	1.10	.02	2.46	16.84	68.96

LOCATION : WU10 MARIUT KHALT P.S. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	6.11	6.38	4471.	7.59	17.38	44.92	.00	8.52	9.63	52.35	1.18	.05	5.38	20.50	45.75
3	14.73	4.20	2814.	7.77	12.98	29.97	.00	5.61	6.34	31.74	.77	.04	3.54	15.87	25.00
4	11.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	8.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	12.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	14.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	15.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	14.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	14.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	14.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	15.29	3.79	2511.	7.81	12.09	27.02	.00	5.06	5.72	28.06	.70	.04	3.19	14.76	21.56
1985	141.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : WI15 KAFR DOWWAR BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 16 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.68	461.	7.75	1.99	3.65	.00	1.97	1.79	2.73	.30	.02	2.25	2.19	2.32
2	-	.44	298.	7.94	1.60	2.32	.00	1.27	1.16	1.77	.19	.02	1.45	1.41	1.50
3	-	.58	393.	7.82	1.84	3.12	.00	1.68	1.53	2.33	.25	.02	1.92	1.86	1.98
4	-	.59	400.	7.81	1.86	3.17	.00	1.71	1.55	2.37	.26	.02	1.95	1.90	2.02
5	-	.57	386.	7.83	1.82	3.06	.00	1.65	1.50	2.29	.25	.02	1.89	1.83	1.95
6	-	.51	345.	7.88	1.73	2.73	.00	1.47	1.34	2.05	.22	.02	1.69	1.64	1.74
7	-	.49	332.	7.90	1.69	2.61	.00	1.42	1.29	1.97	.21	.02	1.62	1.57	1.67
8	-	.60	406.	7.81	1.87	3.23	.00	1.73	1.58	2.41	.26	.02	1.99	1.93	2.05
9	-	.66	447.	7.77	1.96	3.55	.00	1.91	1.74	2.65	.29	.02	2.18	2.12	2.25
10	-	.61	413.	7.80	1.89	3.28	.00	1.76	1.60	2.45	.27	.02	2.02	1.96	2.08
11	-	.59	400.	7.81	1.86	3.17	.00	1.71	1.55	2.37	.26	.02	1.95	1.90	2.02
12	-	.59	400.	7.81	1.86	3.17	.00	1.71	1.55	2.37	.26	.02	1.95	1.90	2.02
1985	-	.58	390.	7.83	1.83	3.09	.00	1.66	1.51	2.31	.25	.02	1.91	1.85	1.97

LOCATION : WI16 KHANDAK GHARBI IRR. 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	.72	486.	7.75	2.12	3.86	.00	2.02	1.89	2.96	.29	.02	2.16	2.72	2.26
3	-	.65	437.	7.80	2.02	3.50	.00	1.78	1.71	2.67	.26	.02	1.95	2.47	1.99
4	-	.64	430.	7.80	2.01	3.45	.00	1.75	1.68	2.63	.26	.02	1.92	2.44	1.95
5	-	.43	284.	7.98	1.68	2.25	.00	1.08	1.13	1.77	.17	.02	1.29	1.68	1.17
6	-	.51	339.	7.90	1.82	2.73	.00	1.33	1.34	2.10	.20	.02	1.53	1.97	1.46
7	-	.53	353.	7.89	1.85	2.85	.00	1.39	1.39	2.18	.21	.02	1.59	2.04	1.53
8	-	.53	353.	7.89	1.85	2.85	.00	1.39	1.39	2.18	.21	.02	1.59	2.04	1.53
9	-	.76	514.	7.73	2.17	4.06	.00	2.15	2.00	3.13	.30	.02	2.28	2.86	2.43
10	-	.86	585.	7.68	2.29	4.54	.00	2.50	2.26	3.54	.34	.02	2.58	3.20	2.84
11	-	.88	599.	7.67	2.32	4.63	.00	2.57	2.32	3.62	.35	.02	2.64	3.27	2.93
12	-	.85	578.	7.68	2.28	4.49	.00	2.47	2.24	3.50	.34	.02	2.55	3.17	2.80
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOCATION : WI17 DILINGAT BRIDGE 1985

THE WATER QUALITY DATA DURING 1985 ARE BASED ON 14 WATER SAMPLES
THE ELECTRICAL CONDUCTIVITY HAS NOT BEEN DAILY MEASURED OR RECORDED

MONTH	DISCH MIL M3	EC	TDS	PH	SAR	ADJ SAR	RSC	CA	MG	NA	K	CO3	HCO3	SO4	CL
1	-	.95	638.	7.69	2.52	5.14	.00	2.55	2.48	4.00	.34	.02	2.82	3.77	2.76
2	-	.67	456.	7.84	2.10	3.67	.00	1.88	1.75	2.82	.24	.02	1.99	2.80	1.88
3	-	.68	463.	7.84	2.11	3.73	.00	1.90	1.77	2.86	.24	.02	2.02	2.84	1.91
4	-	.61	417.	7.88	1.99	3.34	.00	1.73	1.59	2.57	.22	.02	1.81	2.59	1.69
5	-	.68	463.	7.84	2.11	3.73	.00	1.90	1.77	2.86	.24	.02	2.02	2.84	1.91
6	-	.45	312.	8.01	1.69	2.38	.00	1.33	1.17	1.89	.16	.02	1.33	2.02	1.19
7	-	.49	338.	7.98	1.77	2.63	.00	1.43	1.28	2.06	.18	.02	1.45	2.17	1.31
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	.87	586.	7.73	2.41	4.73	.00	2.36	2.27	3.66	.31	.02	2.58	3.50	2.51
10	-	.93	625.	7.70	2.50	5.04	.00	2.50	2.42	3.92	.33	.02	2.76	3.70	2.69
11	-	.66	450.	7.85	2.08	3.62	.00	1.85	1.72	2.78	.24	.02	1.96	2.77	1.85
12	-	.45	312.	8.01	1.69	2.38	.00	1.33	1.17	1.89	.16	.02	1.33	2.02	1.19
1985	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LITERATURE

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APPENDIX 1. TDS/EC RATIO PER LOCATION

1-1. I n t r o d u c t i o n

During the years 1980 till 1984 the quality of the drainage water in the Nile Delta has been based on the analyses of water samples taken at the locations of the network every two or three weeks. These analyses resulted in total dissolved salts (TDS) and electrical conductivity (EC) value.

During the years preceeding 1985 most of the open drain locations have been equiped with EC recorders and the pumping station engineers have received portable EC meters to measure the EC of the pumped drainage water twice a day. This new situation of "continuous" EC recording means better reliability and the high variations in the monthly EC value's, observed in the past will be reduced. This "continuous" EC recording is the basis for further elaboration and calculation to daily, decade, monthly and yearly values. However, the EC values must be transformed to total dissolved salts (TDS), commonly used to present the salinity of the drainage water.

For reasons of simplicity it was decided to establish, for each location in the network, the TDS/EC ratio of the drainage water. The TDS value is calculated then by multiplying the recorded EC value with the TDS/EC ratio. During the establishment of these TDS/EC ratio's it became clear that it varies from one location to the other and even from one sample to the other taken from the same location. Also the yearly average changes from year to year. For this reason it was dediced to use the 6 - year running mean value. For 1985 the years 1980 through 1985 and for 1986 the years 1981 through 1986 will be used.

1-2. T h e T D S / E C r a t i o

In Agriculture Handbook 60 of the United States Department of Agriculture the relation between the electrical conductivity (EC) and the salt content of various solutions is investigated and discussed in detail and shown graphically in several figures. The curves for the chloride salts and for Na2SO4 almost coincide, but MgSO4, CaSO4 and NaHCO3 have lower conductivities than the other salts at equivalent concentrations. In Fig. 1-1 the curves for single salt solutions are shown, in which the concentration is given in percent salts or parts per million and the conductivity in millimhos per cm at 25 degrees Celcius.

From these curves two important conclusions can be drawn:

- the TDS/EC ratio depends highly on the chemical composition of the solution
- with increasing conductivity and concentration of a solution the TDS/EC ratio increases

In Fig. 1-2 the curves of Fig. 1-1 are plotted on a linear scale. It can be seen that in the conductivity range of 0.5 - 1 mmho/cm a single MgSO4 solution results in a TDS/EC ratio of about 900, while a single MgCL2 solution results in a TDS/EC ratio of 410. With the increasing conductivity range of 8 - 16 millimho/cm a single MgSO4 solution results in a TDS/EC ratio of 1600, while a single MgCL2 results in a TDS/EC ratio of 530.

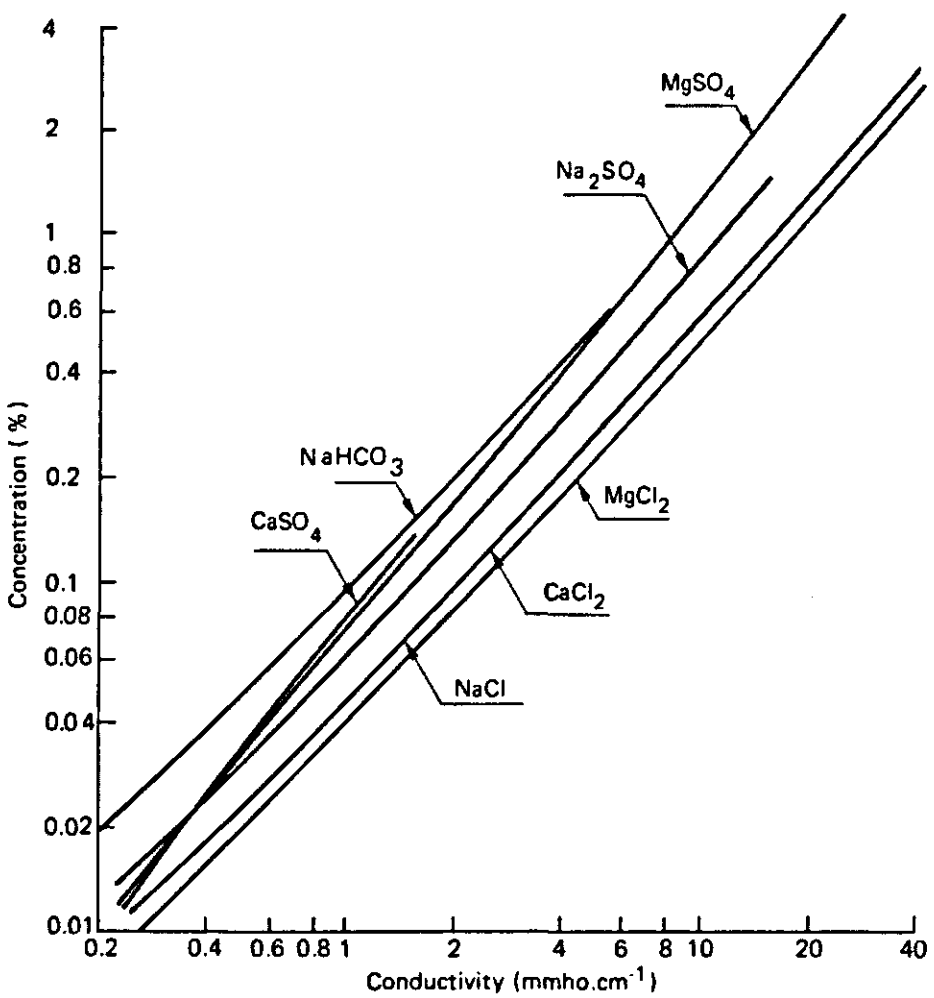


Fig. 1-1. Concentration of single salt solutions in percent as related to electrical conductivity

1-3. Determination of the TDS/EC ratio's and results

The two factors mentioned, chemical composition, and level of salinity of a water sample determine the TDS/EC ratio. Within the measurement network in the Nile Delta there are about one hundred locations where water samples have been taken from 1980 till the present on a two or three weekly basis. These water samples have been analysed by the DRI laboratory and the chemical composition has been stored in the Data Base System of the Reuse of Drainage Water Project.

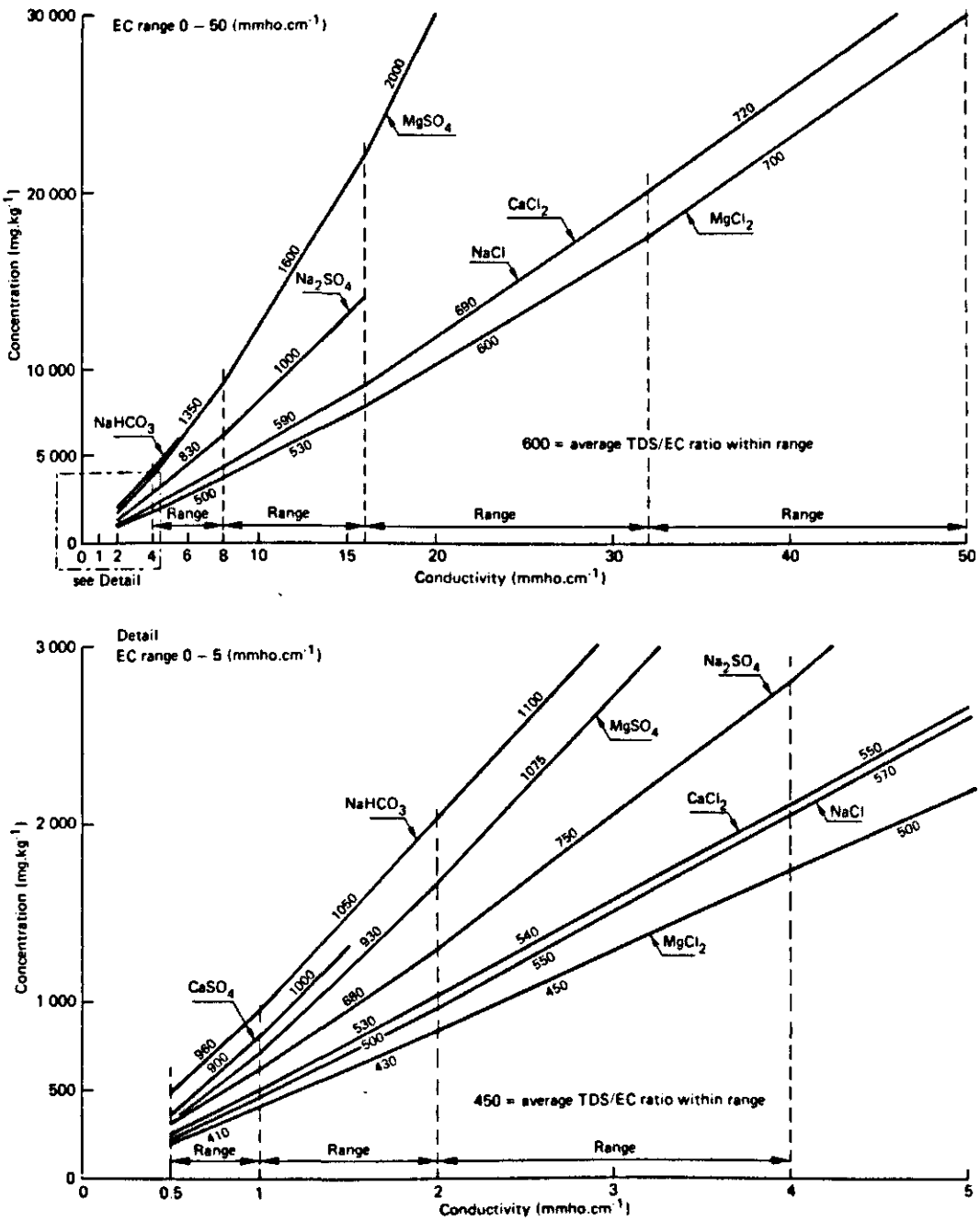


Fig. 1-2. Concentration of single salt solutions in percent as related to electrical conductivity

The TDS/EC ratio per location from all the water sample analyses have been calculated by computer (about 9328 samples). This has been done for the years 1980 through 1986 and the yearly averages have also been calculated. The results of these calculations are shown in Tables 1-1, 1-2 and 1-3 for the Eastern, the Middle and the Western Delta, respectively. The tables include the results of irrigation water and mixed irrigation and drainage water. The results of the TDS/EC ratio per water sample are available at the DRI.

The accuracy of the yearly average TDS/EC ratio is given by the standard deviation which varies from 3 till 10 %.

Based on these results three important conclusions can be drawn:

- the TDS/EC ratio's of separate water samples at one location is highly variable during the year
- the yearly average TDS/EC ratio per location varies from one year to the other
- the "six year average" TDS/EC ratio differs from one location to the other.

1-4. Graphical presentation of the results

In Fig. 1-3 the overall yearly averages of the TDS/EC ratio of the Eastern, Middle and Western Delta are shown. The three individual graphs show that the yearly average increases from the year 1980 till 1982, whereafter it decreases continuously through 1985 with again an increase in 1986.

In Fig. 1-3 also the overall yearly averages of the TDS/EC ratio of irrigation and "mixed" water are shown. Because of the low number of water samples per Nile Delta area, this figure is based on all irrigation water samples collected in the Nile Delta. The ratio for the irrigation water shows the same tendency as that of the drainage water. The reliability of this graph, however, is low compared with the graphs of the drainage water due to the low number of watersamples and the change of locations.

In Fig. 1-4 the areal distribution of the average TDS/EC ratio of the years 1980 - 1986 is given for the Nile Delta.

The first findings of this mapping are:

- the highest TDS/EC ratio's are found in the southern part of all Delta regions (bicarbonate type of water)
- the TDS/EC ratio decreases in downstream direction, towards the Mediterranean Sea
- the lowest TDS/EC ratio's are found in catchment areas bordering the Mediterranean sea with probably high seepage of very saline water (chloride type of water)

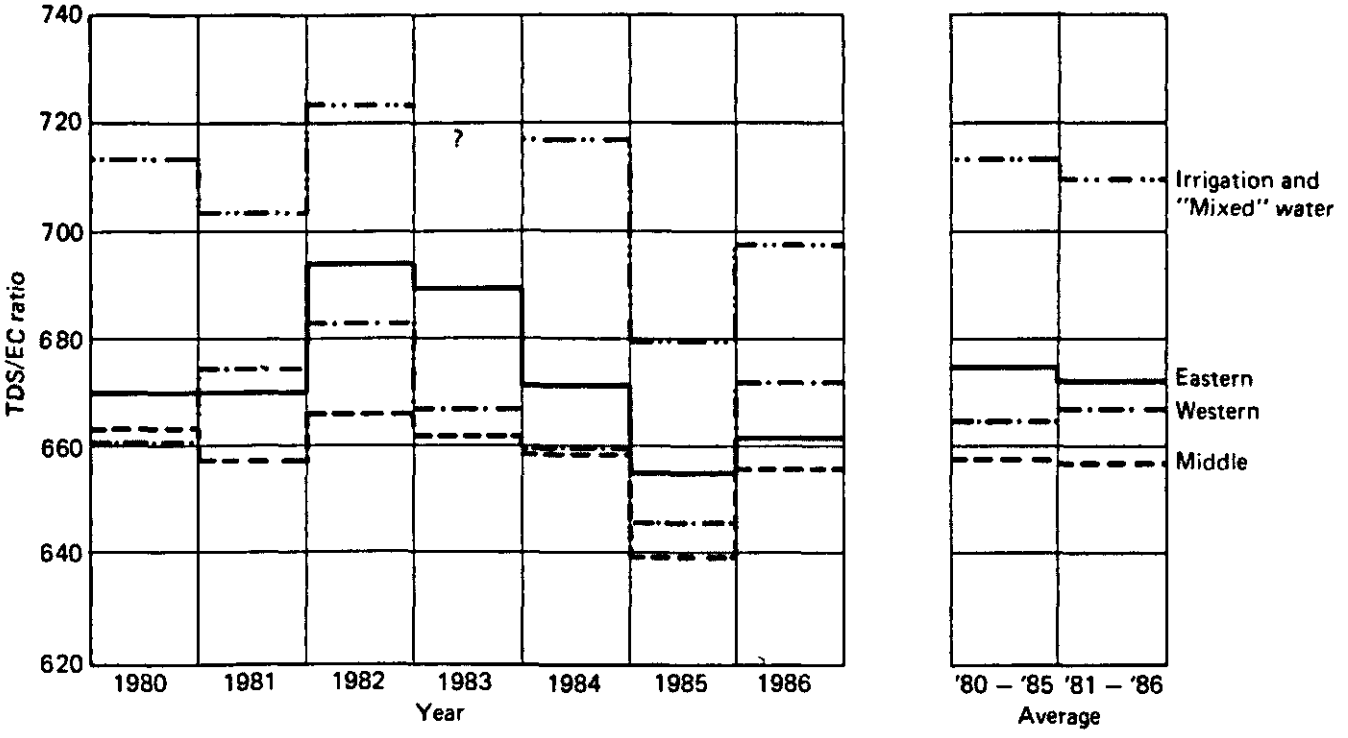


Fig. 1-3. Yearly average TDS/EC ratio per Delta region over the years 1980 - 1986

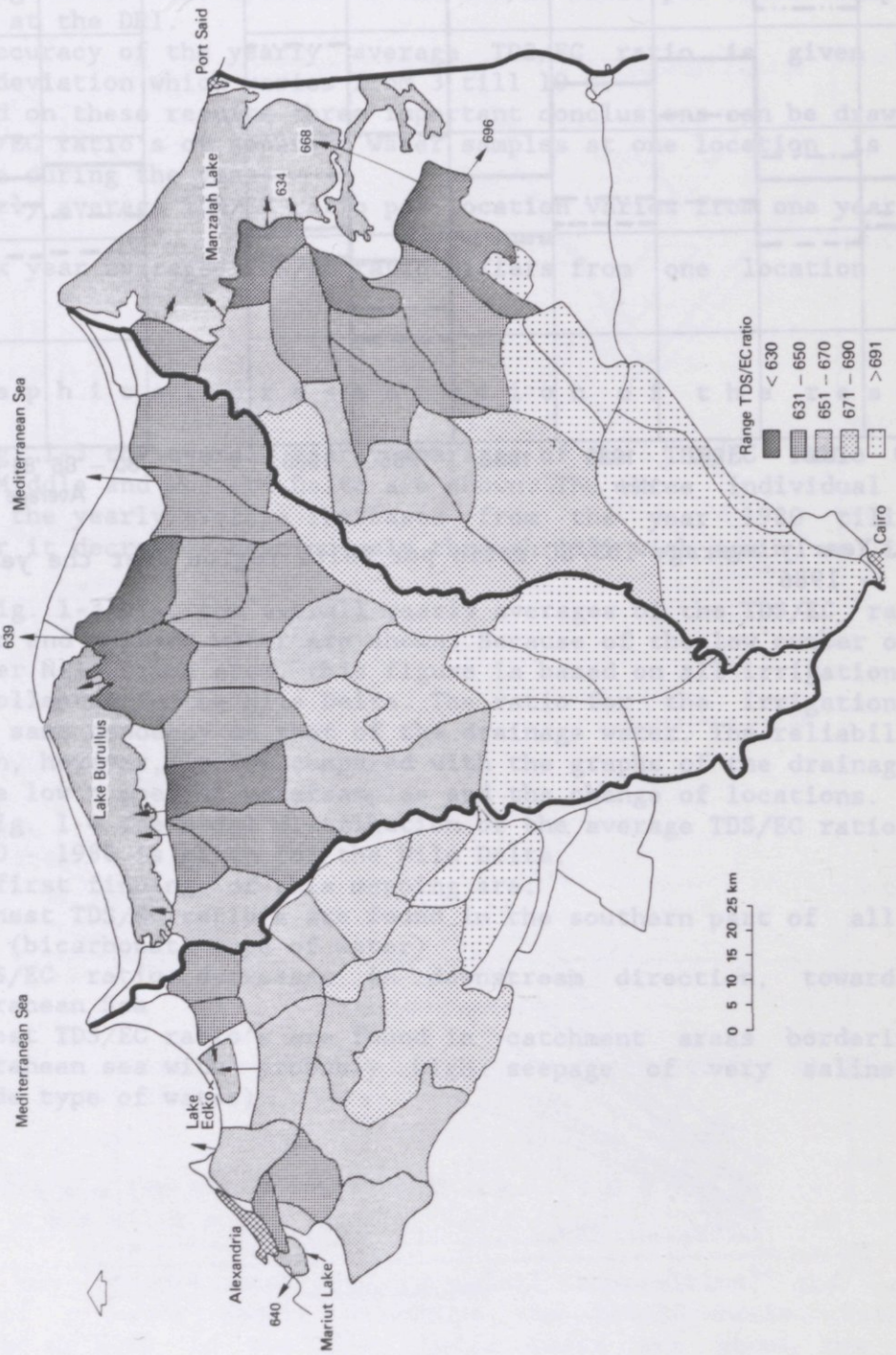


Fig. 1-4. Map of Nile Delta with TDS/EC ratio per catchment area. Averages of the period 1980 - 1986.

Table. 1-1. Yearly average TDS/EC ratio of drainage water in the Eastern Delta

LOCATION CODE	1980	1981	1982	1983	1984	1985	1986	AVERAGE 1980-85	AVERAGE 1981-86
EB01	714	685	749	742	709	720	692	720	716
EB02	719	726	767	754	700	694	688	727	722
EB03	688	707	731	708	697	689	684	703	703
EB04			753		707	715	697	725	718
EB4A	705	715	756	706	704	716	655	717	709
EB4B	713	704	749	717	705	694	695	714	711
EB05	714	726	753	716	700	700	697	718	715
EB06	689	704	712	698	685	668	685	693	692
EB07	697	719	726	707	700	699	671	708	704
EB08	701	703	741	703	707	690	669	708	702
EB09	687	697	732	700	692	670	673	696	694
EB10	615	608	635	633	644	624	623	627	628
EB11	671	657	661	672	673	673	656	668	665
EB12	689	715	728	766	707	677	687	714	713
EB13							705		705
EF01			656	657	637	609	640	640	640
EH01	689	667	698	689	684	657	673	681	678
EH02	682	695	696	700	684	665	672	687	685
EH03	634	629	657	657	644	619	631	640	640
EH04	692	675	696	692	677	649	668	680	676
EH05	669	659	674	701	668	645	654	669	667
EH06	647	642	655	692	634	620	632	648	646
EH07	647	631	646	658	645	621	640	641	640
EH08	623	619	628	631	638	621	626	627	627
EH09	656	668	671	689	663	622	662	662	663
EH10	632	639	639	648	633	615	630	634	634
EH11	645	635	665	656	635	616	636	642	641
EH12	631	617	639	650	629	622	652	631	635
EH13	637	638	638	639	636	615	625	634	632
EH14						668	681	668	675
EH15						635	651	635	643
EH16			728	705	692	659	676	696	692
EH17							655		655
EM01	609	626	625		632	610	630	620	625
ES01	675	691	721	724	677	637	671	688	687
ES02	669	640	671	668	649	623	640	653	649
AVERAGE	670	670	694	689	671	655	662	675	673
Irrigation or mixed water									
EI01			760	735	710	670	701	719	715
EI02					725	668	715	697	703
EI03					743	682	716	713	714
EI04					690	657	675	674	674
EI05						675	708	675	692
EI06						649	678	649	664
AVERAGE			760	735	717	667	699		
number of samples									
drainage	669	470	484	317	487	429	530	2856	2717
irrigation	0	0	13	11	60	76	89	160	249
TOTAL	669	470	497	328	547	505	619	3016	2966
TOTAL number of water samples 1980 - 1986							3635	DRI - ICW	

Table. 1-2. Yearly average TDS/EC ratio of drainage water in the Middle Delta

LOCATION CODE	1980	1981	1982	1983	1984	1985	1986	AVERAGE 1980-85	AVERAGE 1981-86
MB01							634		634
MG01	707	719	734	696	686	700	682	707	703
MG02	704	682	709	691	682	673	680	690	686
MG03	682	700	741	707	695	679	701	701	704
MG04	686	652	680	676	679	659	674	672	670
MG05	679	656	672	660	657	653	650	663	658
MG06	709	661	693	678	675	654	674	678	673
MG07	622	643	627	639	644	620	629	633	634
MG08	670	644	673	681	647	642	659	660	658
MG09	662	634	655	660	652	632	649	649	647
MG10	651	620	624	650	644	613	630	634	630
MG11	656	640	639	661	657	644	646	650	648
MG12	614	639	620	629	626	621	632	625	628
MG13	621	658	646	653	622	618		636	639
MG14							654		654
MG15									
MG16									
MK01	709	699	723				698	710	707
MN01		660	681	681	664	655	675	668	669
MN02	666	640	635	651	650	622	632	644	638
MN03	650	654	679	671	666	651	656	662	663
MN04	637	639	646	630	643	617	622	635	633
MN05									
MS01							729		729
MT01	617	645	613	632	629	607	628	624	626
MZ01							628		628
M101	715	664	694	697	689	668	672	688	681
M102	696	716	730	690	680	653	677	694	691
M103	643	649	653	638	638	615	640	639	639
M104	659	632	657	649	656	611	640	644	641
M701	635	658	618	636	637	619	625	634	632
M801	632	630	623	623	646	627	633	630	630
M111	653	660	660	676	676	631	654	659	660
AVERAGE	663	657	666	662	658	639	656	658	657
Irrigation or mixed water									
MI01	714	746	774	747	726	693	707	733	732
MI02						694	668	694	681
MI03						686	668	686	677
MI04					727	676	710	702	704
MI05						699	683	699	691
MI06					708	680	692	694	693
MI07					740	700	700	720	713
MI08					737	699	711	718	716
MI09					679	652	678	666	670
AVERAGE	714	746	774	747	720	687	691		
number of water samples									
drainage	313	454	344	261	317	368	427	2057	2171
irrigation	12	17	9	7	66	95	66	206	260
TOTAL	325	471	353	268	383	463	493	2263	2431
TOTAL number of water samples 1980 - 1986							2756		DRI - ICW

Table. 1-3. Yearly average TDS/EC ratio of drainage water in the Western Delta

LOCATION CODE	1980	1981	1982	1983	1984	1985	1986	AVERAGE 1980-85	AVERAGE 1981-86
WB01	647	675	670	645	646	625	653	651	652
WE01	684	677	711	710	680	659	703	687	690
WE02	680	671	707	705	673	657	700	682	686
WE03	671	671	696	601	661	637	673	656	657
WE04	669	698	716	702	671	655	684	685	688
WE05	711	708	754	710	696	698	724	713	715
WE06	697	697	727	710	677	675	714	697	700
WE07	682	674	712	718	678	676	699	690	693
WE08	648	642	673	667	644	636	666	652	655
WE09	660	671	691	691	668	644	669	671	672
WE10	643	662	657	632	624	608	653	638	639
WE11	654	667	669	652	632	625	661	650	651
WE12		645	660	666				657	657
WE13	662							662	
WN01		694	690					692	692
WN02		696	684					690	690
WN03		683	689					686	686
WT01	658	664	681	675	657	627	664	660	661
WU01	661	661	683	670	667	661	670	667	669
WU02	665	687	681	665	669	663	673	672	673
WU03	658	670	675	662	659	662	655	664	664
WU04	646	672	670	662	658	657	674	661	666
WU05	636	670	644	630	635	628	650	641	643
WU06	644	686	663	650	645	626	645	652	653
WU07	654	702	659	648	668	653	644	664	662
WU08	636	649	650	643	635	612	661	638	642
WU09	643	661	643	632	649	613	649	640	641
WU10									
WU1A						653	676	653	665
AVERAGE	661	675	683	667	659	646	672	665	667
Irrigation or mixed water									
WI05			701					701	701
WI06		674	706					690	690
WI07		679	725					702	702
WI08			691					691	691
WI09		711	752					732	732
WI10			755					755	755
WI11			701					701	701
WI12			670					670	670
WI13					711			711	711
WI14					695			695	695
WI15					724	676	693	700	698
WI16						680	720	680	700
WI17						688	738	688	713
AVERAGE		688	713		710	681	717		
number of water samples									
drainage	451	445	418	272	355	361	382	2302	2233
irrigation	0	77	72	0	32	43	29	224	253
TOTAL	451	522	490	272	387	404	411	2526	2486
TOTAL number of water samples 1980 - 1986							2937	DRI - ICW	

ويصل مجموع مياه الصرف من المساحة الكلية للدلتا والتي تبلغ (٤ر٥٥١ر٠٠٠) فدان (بما فيها منطقة غرب النوبارية ومساحتها ٢٨٠ر٠٠٠ فدان) خلال عام ١٩٨٥ الى مايقرب من ١٦٥٠١ مليون م٣ .

تم أعادة استخدام كمية تقدير بحوالى ٢٨٥٩ مليون م٣ متوسط ملوحتها ٩١٢ جم من الاملاح / م٣ بصفة رسمية كما تم صرف ١٣٦٤٢ - مليون م٣ متوسط ملوحتها ٢٤٧١ جم / م٣ الى البحر الابيض المتوسط او البحيرات التى تتصل بشكل مباشر بالبحر .

ونظريا يمكن القول بانه يمكن اعادة استخدام كمية قدرها ١٦٠٠ مليون م٣ من المياه التى لاتزيد ملوحتها عن ١٠٠٠ جم / م٣ و ٤٣٠٠ مليون م٣ من المياه التى تتراوح ملوحتها بين ١٠٠٠ - ١٥٠٠ جم / م٣ لاغراض الرى .

ويصرف مصرف بحر البقر فى بحيرة المنزلة كمية من المياه تقدر بحوالى ١٠٠٠ مليون م٣ سنويا متوسط ملوحتها ١١٠٠ جم / م٣ - وهى مياه ملوثة بمياه الصرف الصحى ومخلفات الصناعة وتعتبر غير صالحة لاغراض الرى بشكل عام .

كانت كمية المياه المقاسة عند كوبرى بحر حادوس حوالى ١٦٠٠ مليون م٣ متوسط ملوحتها ١٣٥٠ جم / م٣ .

وتعتبر مياه هذين المصرفين من المكونات الرئيسية لتغذية ترعة السلام .. ونظرا للخبرة التى تم اكتسابها وطرق القياس والاعمال الحسابية لذلك فان نتائج عام ١٩٨٥ تعتبر أدق من تلك التى يشملها التقريرين السابقين عن عام ١٩٨٠ - ١٩٨٤كذلكفأن أستخدام الحاسب الالى من طراز (HP 150) أدى الى تسهيل عمليات الحساب وتقديم البيانات بشكل أفضل .

وقد يكون من المفيد دراسة الفروق بين نسبة الاملاح الذائبة الى درجة التوصيل الكهربى لكل نقطة قياس والتى تم أيجادها بالحساب بتفصيل اكبر .

ومن الواضح ان هذه النسبة التى تم تحديدها بناء على تحاليل العينات للاعوام ١٩٨٠ - ١٩٨٥ تختلف من عام الى آخر كذلك فان قيمتها تتناقص من ٧٢٠ فى جنوب الدلتا الى ٦٢٠ فى شمالها ولايوجد مجال فى هذا التقرير لاستنتاج مايزيد عن ذلك فى هذا السبيل .

* الملخص والنتائج :-

تم تجميع بيانات عن كمية ونوعية مياه الصرف فى عدد كبير من المواقع الهامة على المصارف الرئيسية ومحطات طلمبات التصرف فى دلتا نهر النيل خلال عام ١٩٨٥ .

يتم الحصول على هذه البيانات من محطات طلمبات الصرف بمساعدة المهندسين والعاملين القائمين بأدارة هذه المحطات وتراجع هذه البيانات مع البيانات التى يتم الحصول عليها مباشرة من مطلحة الميكانيكا والكهرباء وباستخدام علاقات التصرف التى تم تحديدها بواسطة معهد بحوث الصرف يصير حساب التصرفات الفعلية لكل محطة .

أما فى اماكن القياس على المصارف المكشوفة فيتم حساب التصرف عن طريق علاقات التصرف / عمق المياه أو التصرف / سرعة المياه حسب الحالة وذلك عن طريق قياسات مناسيب المياه أو سرعتها التى يتم تسجيلها بواسطة الاجهزة اللازمة لذلك .

يتم قياس التوصيل الكهربى للمياه عن طريق اجهزة التسجيل المركبة فى المصارف المكشوفة اما فى محطات الطلمبات فيتم القياس مرتين يوميا بواسطة أجهزة قياس يمكن حملها .. ولحساب مجموع الاملاح الذائبة يتم ضرب درجة التوصيل الكهربى فى النسبة بين مجموع الاملاح الذائبة ودرجة التوصيل الكهربى التى تم تحديدها على أساس تحاليل عينات المياه خلال الاعوام ١٩٨٠ - ١٩٨٥ لكل موقع على حده .

ويقوم مهندسو معهد بحوث الصرف بتجميع البيانات خلال الزيارات للمواقع التى تتم مرة كل ثلاثة أسابيع حيث يتم فى نفس الوقت مراجعة ومعايرة اجهزة التسجيل واجهزة القياس كما يتم اخذ عينات من المياه حيث تحلل فى معامل المعهد - وتقدم النتائج النهائية للحسابات فى هذا التقرير على شكل متوسطات شهرية كذلك تم تلخيص المجموع السنوى والمتوسطات لكل منطقة من مناطق الدلتا .

* المعامـــــــل :ـ

رئيسه الشعبة بالمعهد : دكتورة / ساميـة الجنـــــــــــــــدى

فريق المشـــــــــروع :

مهندســـــة/ ليلـى السيســـــــــــــــــــــــى

مهندســـــة/ عطيات ابو بكـــــــــــــــــــــــر

مهنـــــدس/ جمـال عبد الناصر كامـــــــــــــــــل

مهندســـة / سميـرة سيد محـــــــــــــــــــــروس

مهندســـة / نصـرة عبد اللـــــــــــــــــــــــة

* الاستشاريـــــــن :ـ

مهندس / د٠ بولـــــــــــــــس

مهندس ٠ (/ روســـــــــــــت

د ٠ ج / هارمســـــــــــــن

الفريق البحثى للمشـــــروع

مدير المشروع :

د٠م / محمد حسن عامـــــــــــر
د/ ب ٠ أ ٠ رايتمـــــــــــا

* قسم الصرف المكشـــــــوف :ـ

رئيس بالشعبة بالمعهد : دكتور / ضياء الدين القوصـــــــــــى

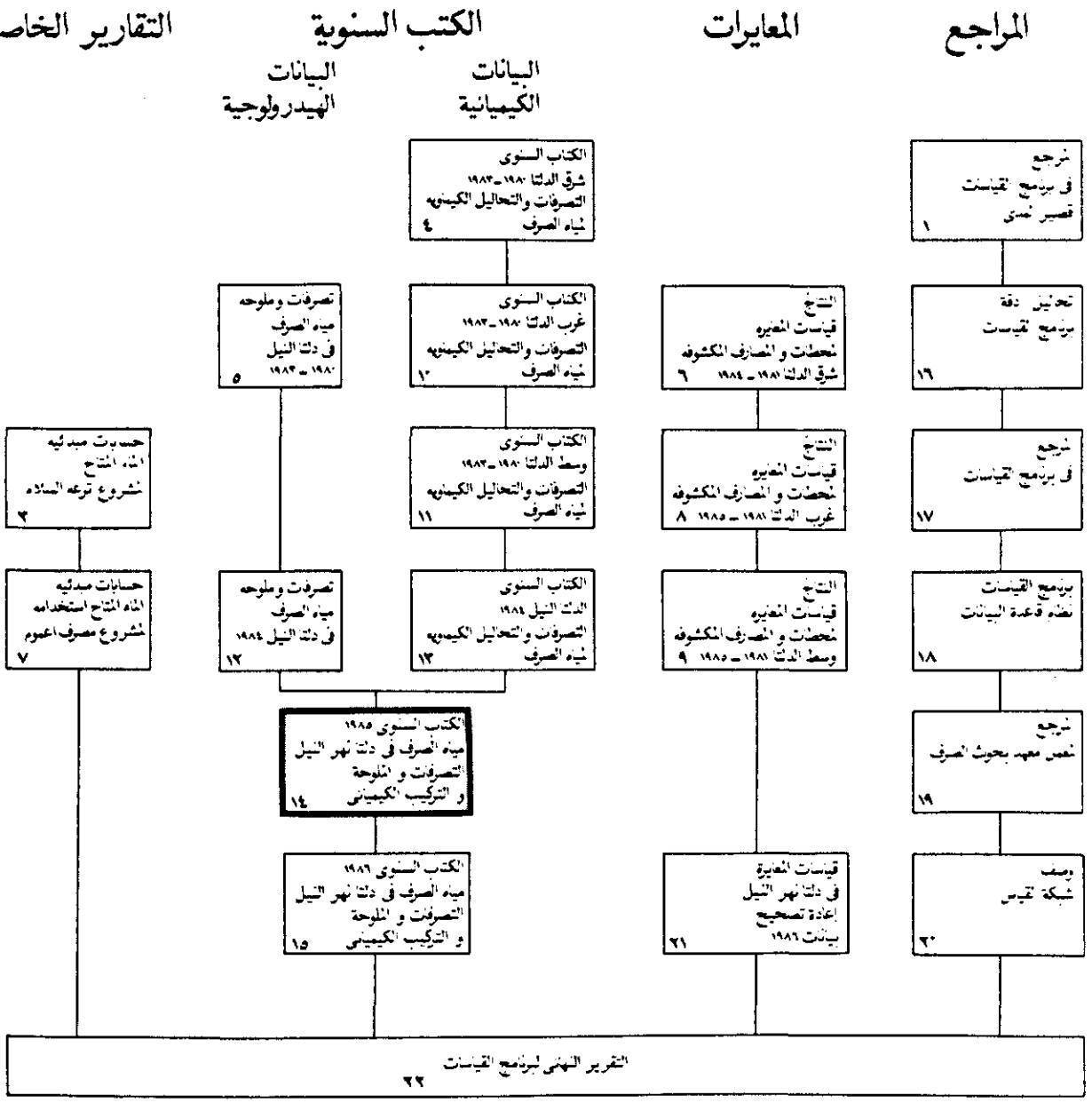
* الفريق الهولندى المقيـــــــم :

مهندس / م٠ ماسكانـــــــــــــــــــــــــت
مهندس / هـ ٠ جـــى ٠ م ٠ بنيـــــــــــــــزدورب
مهندس / م٠ ف ٠ ر ٠ سميـــــــــــــــــــــث
مهندس / ج ٠ د ٠ زويتبـــــــــــــــــــــرود

* الفريق المصـرى للمشـــروع :

دكتـــور / محمد احمد عبد الخالـــــــــــــــــق
دكتورة / شادن عبد الجـــــــــــــــــــو اد
المهندس/ عادل عبد الرشيد سليمـــــــــــــــان
المهندس / احمـد محمـد مرســـــــــــــــــى
المهندس / محمـد عزت حســـــــــــــــــن
المهندس / ابراهيم احمد لاشيـــــــــــــــن
المهندس / مجدى عبد النبـــــــــــــــــى
المهندس / نبيل فتحـى قنديـــــــــــــــل
المهندس / محمـد سعد عبـــــــــــــــاس
المهندسة / ميرفت الجنـــــــــــــــــدى
المهندسة / سميـة محمـد عبـــــــــــــاس

تقارير برنامج القياسات



مشروع اعادة استخدام مياة الصرف

تقرير رقم ١٤

الكتاب السنوى ١٩٨٥

مياه الصرف فى دلتا نهر النيل

التصرفات و الملوحة و التركيب الكيميائى

الجزء (أ) كمية و نوعية مياه الصرف

الجزء (ب) التركيب الكيميائى لمياه الصرف

الفريق البحثى

١٩٨٧

معهد بحوث الصرف مركز البحوث المائية ج. م. ع.

معهد بحوث ادارة الاراضى والمياة

واخننجن، هولندا

مشروع اعاده أستخدام ميـــاه الصـرف نشـاط مشتـرك بيـــــــــــن :-

معهـد بحوث الصـــــــــــــــرف - الجيـزه - جمهوريه مصر العربيـــــــة

ومعهد بحوث اداره الاراضى والميـــــاة - فاجننجن - هولنـــــــــــــــــدا

وتعتبـر الجهـه الممولـه للمشـروع وزاره الرى بجهوريه مصر العربيـــــــــــــــة ووزاره العلاقات الخارجيـه بهولنـدا فى أطار البرنـامج المشترك للتعاون الفنـــى بين مصـر وهولنـــــدا .

ويعمل المجلس الاستشـارى المصـرى الهولنـدى كهيئـه مشـرفة .

نتـائج الدراسات التى تمت خلال هذا المشـروع ستعرض اما فى تقـارير مبدئيـــــــة او تقـاريـر نهائيـــه . حيث ان محتويات التقارير المبدئيه ممكن تختلف بشـــدة من تقديم مبسط للبيانـات او منـاقشات لنتـائج وخلاصات بحثيـــه .

الاراء والتوصيات الموجوده فى التقاريـر السابقه تعتبـر اراء المؤلف فقـــــط وليس لهـا علاقـه بـالمعاهـــــد اوالوزارات المعنيـة .

بسم الله الرحمن الرحيم

"وجعلنا من الماء كل شى حى"

صدق الله العظيم